COMMONWEALTH OF MASSACHUSETTS

Statewide Emergency Telecommunications Board

Enhanced 9-1-1 Telecommunicator Training

Student Manual

Statewide Emergency Telecommunications Board
Training Department, December 1992

Produced as a cooperative effort by staff members of the Statewide Emergency Telecommunications Board (SETB) and NYNEX including Glenn A. Roach, LeWana Clark, Kathy Greenwood, and Ruth Mullen.

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*A call for **E 9-1-1***
*generated by voice or on a **TTY** is routed by*
*the **ESN**, depending on the **ESZ**, then drops*
*into the **PSAP** onto an **APU**, made by **PEI**,*
*equipped with **MAARS** that displays an **ANI***
*and **ALI**, retrieved from the **MSAG**, all*
*maintained by the **SRC** because of the*
collaborative efforts of the
***SETB** and **NYNEX**.*

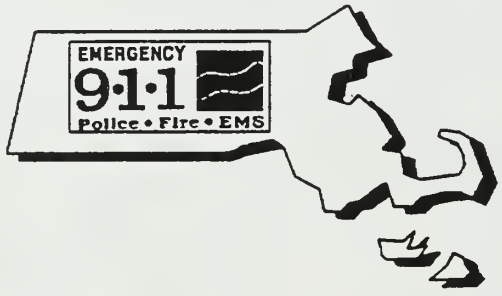
"A 9-1-1 SYSTEM IS ONLY AS GOOD AS THE PERSONNEL WHO OPERATE IT."

- EXECUTIVE DIRECTOR,
STATEWIDE EMERGENCY
TELECOMMUNICATIONS BOARD

INTRODUCTION

Welcome to the Telecommunicator training course on the Enhanced 9-1-1 (E 9-1-1) system for the Commonwealth of Massachusetts. The goals and objectives of the course are to:

- Explain what the Enhanced 9-1-1 (E 9-1-1) system is and how it operates.
- Describe how an E 9-1-1 call will be processed, including how the call is originated, routed, transferred and terminated.
- Provide an appreciation for the public benefits of the E 9-1-1 system.
- Understand and operate the telephone equipment.
- Provide Call Handling procedures.
- Provide TTY Call Handling procedures.



At the end of this training, you will be able to:

- Understand the technology of E 9-1-1
- Understand how to use the equipment.
- Use Call Handling and TTY Call Handling procedures appropriate for E 9-1-1.
- Handle problems with the E 9-1-1 system.

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ENHANCED 9-1-1 OVERVIEW

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ENHANCED 9-1-1

OVERVIEW

Enhanced 9-1-1 (E 9-1-1) is the latest version of a program designed to provide an easily remembered, 3-digit emergency number for the entire country. The recommendation for a nationally uniform number dates from 1967, but similar systems in Europe and around the world have been in place since the 1930's.

Legislation to provide a statewide Enhanced 9-1-1 service in Massachusetts was signed into law on December 11, 1990. The enacted legislation established the Statewide Emergency Telecommunications Board (SETB), whose charge was to develop standards and plans as well as implement and maintain oversight authority for the E 9-1-1 system in the 351 cities and towns in the state. The SETB is part of the Executive Office of Public Safety.

The implementation schedule called for the cities and towns to submit their municipal plans to the SETB by July 3, 1993. The plans required information on:

- Police, Fire and Emergency Medical Service (EMS) agencies operating within their city/town.
- Communication capabilities, including telephone and radio.
- Volumes of emergency calls handled by each agency.

Information on other types of services was also needed, including:

- Poison Control Centers
- Crisis Intervention Centers
- Battered Women's Shelters
- Civil Defense Centers, etc.

PUBLIC SAFETY ANSWERING POINT (PSAP)

The Public Safety Answering Point (PSAP) is the critical connection point between the general public and the assistance provided by various public service agencies.

A PSAP may use any of the following methods to handle a 9-1-1 call:

- direct handling
- direct transfer
- relay or conferencing

The following categories of PSAP's may be implemented in Massachusetts:

TYPES OF PRIMARY PSAPs

PRIMARY PSAP

- The first point of reception of a 9-1-1 call
- Equipped with ANI and ALI displays
- Can transfer a call to another PSAP, if necessary
- Will often be located within the same community as the caller
- Has Teletypewriter (TTY) call handling capability

REGIONAL PSAP

- Operated by, or on behalf of two or more municipalities in the state
- Is a Primary PSAP for Call-Taking and Call-Transfer activities
- May also dispatch and/or control public safety resources serving multiple jurisdictions (pursuant to municipal agreements in force)
- Has TTY call handling capability

DEFAULT PSAP

- Receives calls when the control tandem is unable to selectively route a call due to trouble, such as ANI failure or garbled digits
- When calls cannot be selectively routed for any reason, the call will be routed to a designated default PSAP
- Has TTY call handling capability

ALTERNATE PSAP

- Receives calls when the Primary cannot, due to network or PSAP equipment failure or overload
- Primary, Full Secondary and Regional PSAP's can be designated as Alternate PSAP's.
- Has full ANI/ALI and Call Transfer capability
- Has TTY call-handling capability

TYPES OF SECONDARY PSAPs

FULL SECONDARY PSAP

- Is equipped with ANI/ALI displays
- Receives 9-1-1 calls **ONLY** when they are transferred from the Primary PSAP

  OR

  On an alternate routing basis when calls cannot be completed to the Primary PSAP
- Has all other features common to Primary PSAP's
- Has TTY call-handling capability

LIMITED SECONDARY PSAP

- Equipped, at a minimum, with ANI/ALI Display printout capability
- Receives 9-1-1 calls **ONLY** when they are transferred from the Primary PSAP
- Data CANNOT be re-routed to another location and may not necessarily be sent simultaneously with the voice call.
- Should have TTY call-handling capability

RINGING SECONDARY PSAP

- Does not receive ANI/ALI displays
- Receives 9-1-1 calls that are transferred from the Primary PSAP
- Ringing PSAP's may or may not operate twenty-four hours per day.
- Should have TTY call-handling capability

MODULAR ANI/ALI RETRIEVAL SYSTEM (MAARS)

The Modular ANI/ALI Retrieval System (MAARS) equipment, manufactured by Plant Equipment Incorporated (PEI), will be installed in all PSAP's in the state. MAARS equipment has several components and many features which are activated in the E 9-1-1 system.

The MAARS system includes telephone sets, optional headsets, printers, display screens, TTY keyboards, control cabinets and other ancillary equipment.

E 9-1-1 DATABASE

The E 9-1-1 Database used information from municipal, state and telephone company sources. A principal piece of information is the Master Street Address Guide (MSAG). The MSAG contains data on all the street names and street numbers in the Commonwealth. The accuracy of the MSAG database is a critical part of E 9-1-1.

The MSAG is maintained by the Database Management Center (DMC) of NYNEX.

EMERGENCY SERVICE NUMBERS (ESN)

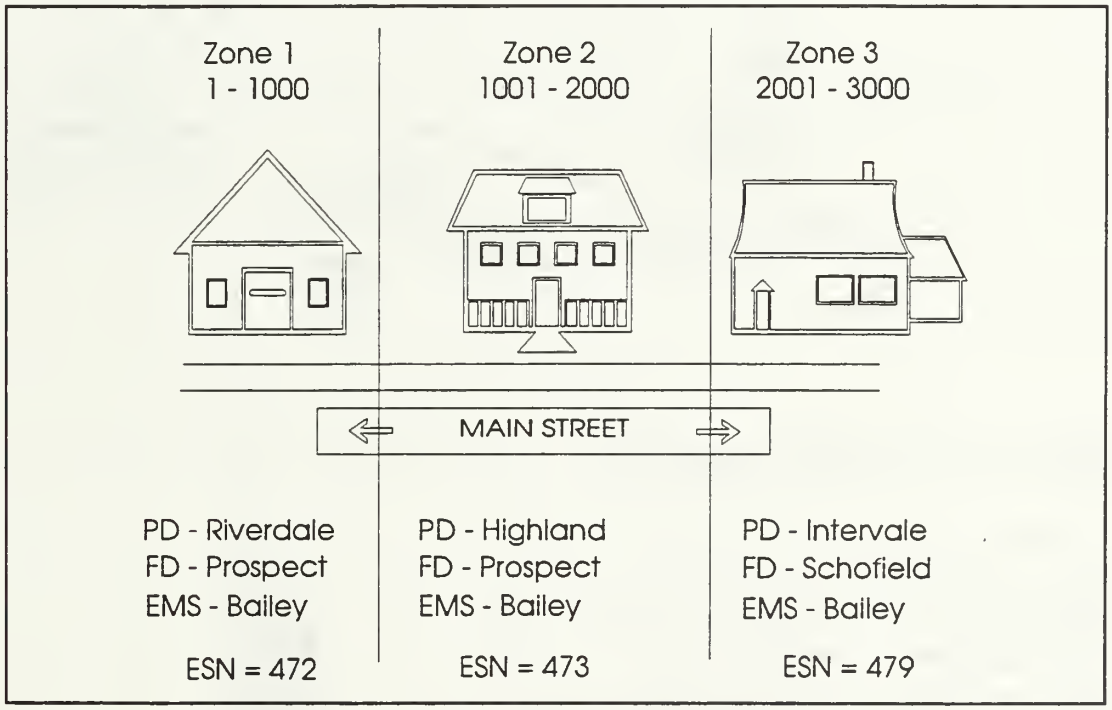
Every working telephone line in the state is associated with a 3-digit code number, e.g. 479. Emergency Service Numbers (ESN) identify the emergency agencies that service the subscriber's location. The ESN of a telephone line determines to which PSAP a 9-1-1 call will be routed. This is important when:

- The town does not have its own telephone exchange.
- Residences and businesses have telephone service from a different town.
- Certain residents are isolated from the rest of the town (island, peninsula).

EMERGENCY SERVICE ZONES (ESZ)

Each municipality in the state has established Emergency Service Zones (ESZ's) within their jurisdiction. The ESZ's detail which public safety and private service agencies have responsibility for a particular street, section of the city or town, or the entire municipality. For example:

- Different EMS or Ambulance services may cover different sections of a town.
- Several Fire Districts can operate within a municipality.
- Emergency calls are handled by different dispatchers, but within the same department and municipality.

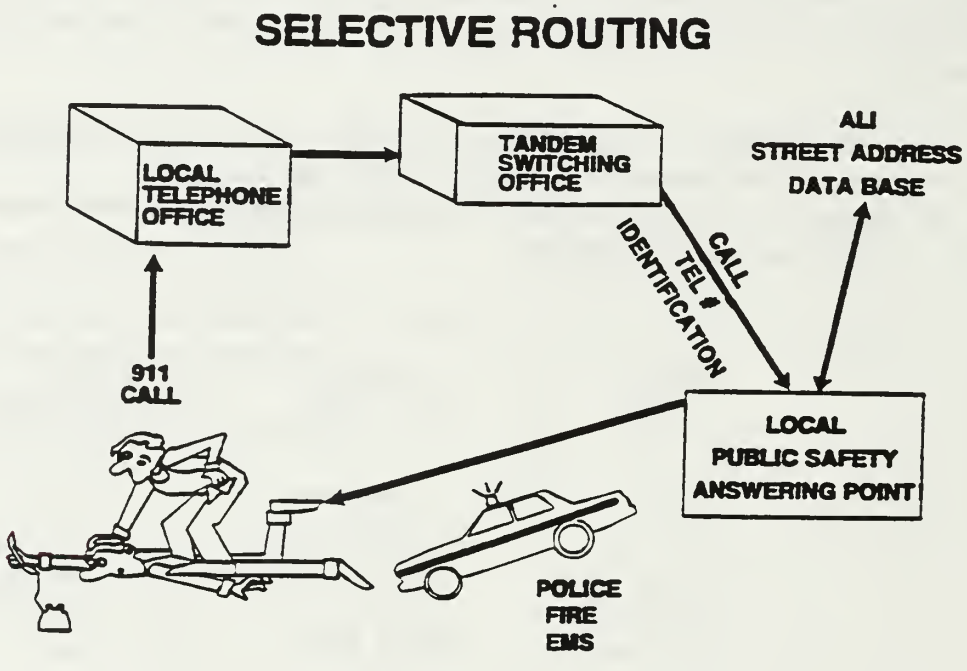


TELEPHONE ARCHITECTURE

When 9-1-1 is dialed, the call enters the special 9-1-1 network. The call is routed to one of four "tandem" telephone switching centers in the state. From there, the call is routed to the appropriate PSAP. The tandems serve as a back-up to each other.

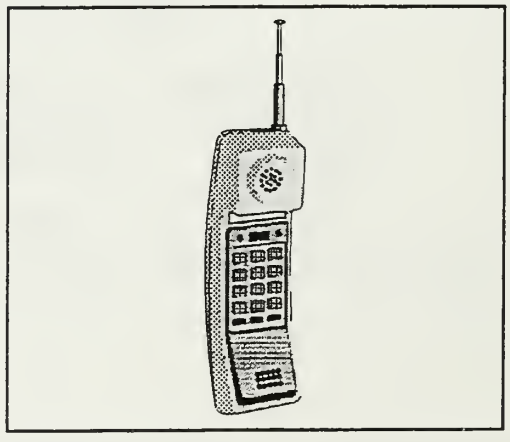
SELECTIVE ROUTING

Selective Routing enables the E 9-1-1 system to route calls to the proper PSAP. The Automatic Number Identification (ANI) and ESN information are contained in the selective routing tables of each 9-1-1 tandem. When a caller dials 9-1-1 and the ANI is routed to the 9-1-1 tandem, the 9-1-1 tandem selectively routes the call to the primary PSAP as identified by the corresponding ESN.



CELLULAR PHONE SERVICE

9-1-1 calls originating from Cellular or Mobile telephones will be routed to a designated PSAP. From there, the call will be transferred or relayed to the appropriate agency. Cellular calls are routed by cell site face, to help identify the general location of the caller.



REVIEW EXERCISE

Directions: Fill in the blanks.

1. The Public Safety Answering Point is also known as a _ _ _ _.

2. The first point of reception of a 9-1-1 call is the_ _ _ _ _ _ _ PSAP.

3. A _ _ _ _ _ _ _ _ PSAP is operated by, or on behalf of, two or more communities.

4. The Modular ANI/ALI Retrieval System or _ _ _ _ _ equipment will be installed at all PSAPs in the state.

5. The E 9-1-1 _ _ _ _ _ _ _ _ uses information from municipal, state and telephone company sources.

6. The _ _ _ of a telephone line determines to which PSAP a 9-1-1 call will be routed.

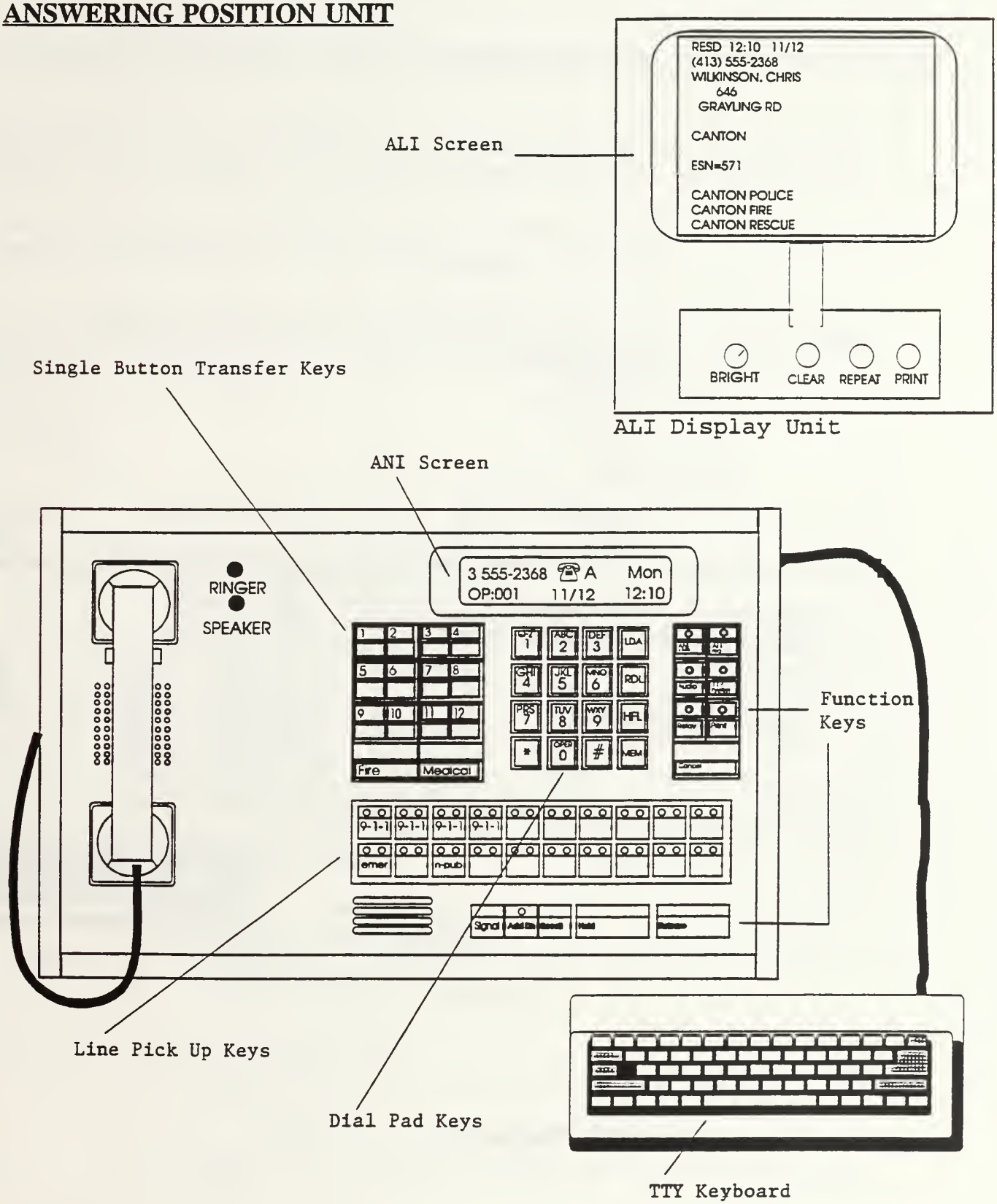
7. _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ enables the E 9-1-1 system to route calls to the proper PSAP.

8. Cellular calls will be routed to a designated _ _ _ _.

ANSWERING POSITION UNIT

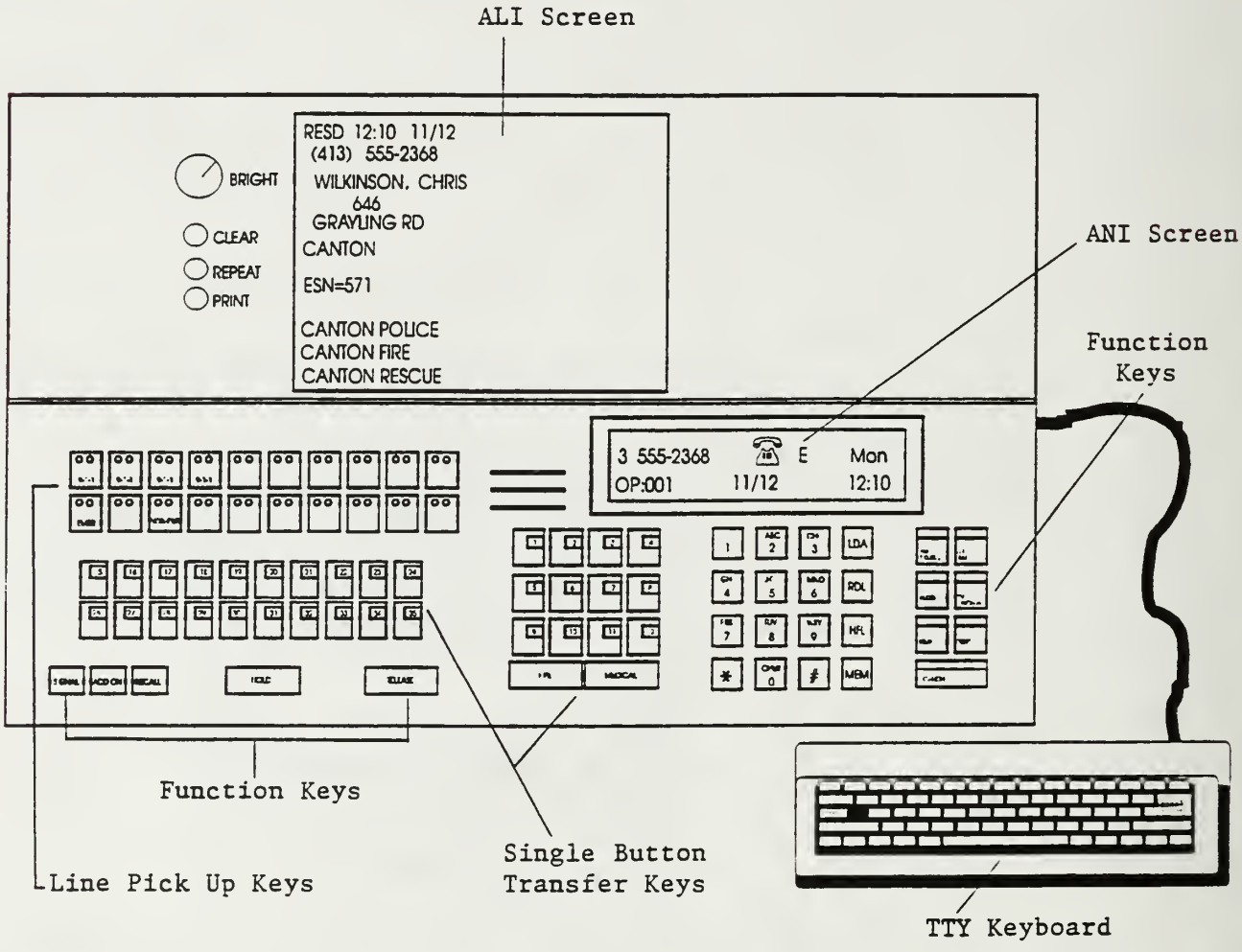
CONTENTS

ANSWERING POSITION UNIT



Desktop APU with TTY Keyboard

ANSWERING POSITION UNIT (cont'd)



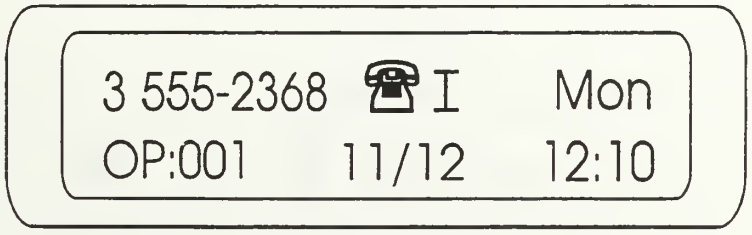
Console-Mount APU with TTY Keyboard

AUTOMATIC NUMBER IDENTIFICATION (ANI)

The Automatic Number Identification (ANI) operates by using the calling party's telephone number to access a database. The database determines which PSAP will receive the call.

The ANI information is provided to the PSAP Telecommunicator on a visual display on the Modular ANI/ALI Retrieval System (MAARS) telephone equipment.

The ANI display is located in the center of the upper half of the APU. The ANI display provides information in a two-line, 20 character-per-line format. The purpose of the ANI display is to provide the Telecommunicator with important information on the status of the APU and any calls being handled.



- Line 1 is separated into three fields:
  - The ANI field
    - The first position is the Numbering Plan Digit (NPD).
      (1 = 617, 2 = 508, 3 = 413, 0 = Rhode Island or Vermont)
    - Telephone number
  - The status field
    - On-Hook and Off-Hook symbol
    - Mode (current mode the APU is in)
    - TTY and Abandoned Call indicators
  - Day of the week (e.g. Mon)
    - When a call is ringing in, the day of the week is replaced by a T and the trunk number.
      Example: T001 indicates trunk number one
    - When the call is answered, the display reverts back to a day of the week.

AUTOMATIC NUMBER IDENTIFICATION (ANI) (cont'd)

- Line 2's format varies according to the mode of operation the APU is currently in. In the Idle mode, Line 2 displays the:
  - Telecommunicator's ID (OP:001, see ANI above)
  - Date and Time (11/12 and 12:10, see ANI above)
- In other modes, Line 2 displays various messages. It shows incoming and outgoing TTY call messages, broadcast messages and alarm messages.
- An ANI Display on a TTY call looks like this:

- Broadcast messages are generated by a supervisor for internal use.
- Alarm messages indicate that there is trouble somewhere in your equipment.

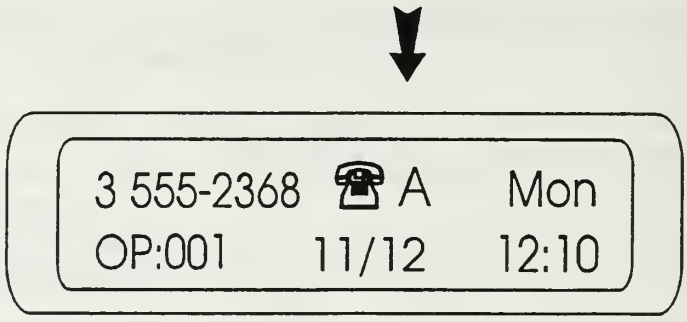
ANI DISPLAY (cont'd)

The ANI display characters for position numbers 12 to 40 are listed below. (In most cases, position numbers 1-11 display the NPD and the telephone number of the calling party.)

Character Position	Symbol/Letter	Description
12		On-Hook symbol
		Off-Hook symbol
13	I	Idle mode
	A	Administrative mode
	E	Emergency mode
	X	Transfer mode
	D	Disable mode
14	Flashing T	TTY mode
15	(Empty field)	everything OK
	Steady 	power OK, but battery low
	Flashing 	power failure, the APU is running on the battery
16		abandon call indication
17 - 20	T + 3 digits or L + 3 digits	If an E call is pending, a T plus 3 digit trunk number, OR, if an e call is pending, an L plus 3 digit line number will show.
18-20	Mon, Tue, Wed, Thu, Fri, Sat, Sun	If in I mode, the day of the week will show as a 3 letter abbreviation.
21-26	OP: (plus) 3 digits	If in the I mode, the operator number shows.
	OP: (plus) 3 digits S , s	In normal Idle Supervisor mode, the operator number and a lower-case s is displayed. If in higher Idle Supervisor mode, an upper-case S is displayed.
21-40	Teletype scrolling messages	Depending on condition, could either be a broadcast, system, alarm or call information message.
	Teletype scrolling messages	In TTY mode, will show incoming and outgoing conversations.
30-34	Date in MM/DD format	If the APU is in Idle mode, the date will appear.
36-40	Time in HH:MM format.	If the APU is in Idle mode, the time will appear.

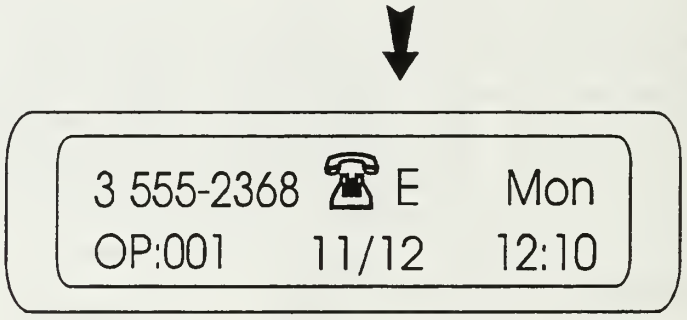
APU MODES

(A) Administrative Mode



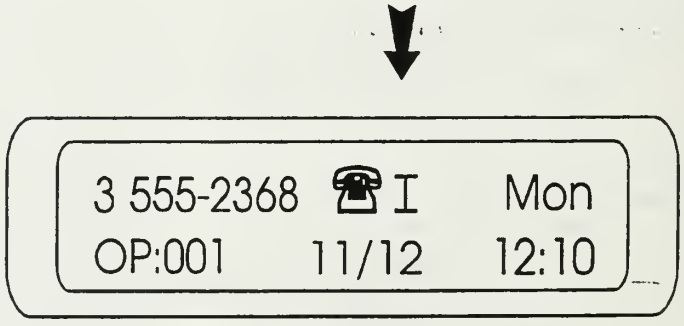
- Activated when an administrative line has been selected on the APU. TTY calls can be handled in this Mode. The letter **A** denotes the Administrative Mode.

(E) Emergency Mode



- Activated when a dedicated 9-1-1 line has been selected. In this Mode, calls can be transferred to another PSAP and TTY calls can also be handled.

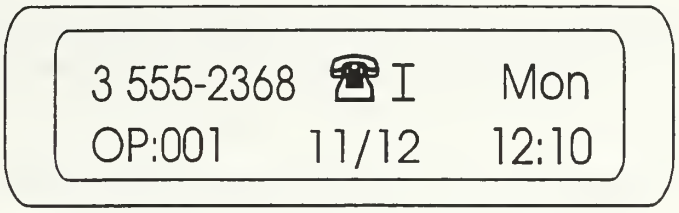
(I) Idle Mode



- The APU is in the Idle Mode when the following conditions exist: APU is On-Hook (No dial tone and On-Hook symbol is displayed) and no Functions have been selected.

APU MODES (cont'd)

Programming Mode



- The APU is in the Programming mode when the telecommunicator is programming a memory dial number, or when a supervisor or other authorized agent is programming one of the APU setup parameters. To enter the programming mode from the idle mode, press **MEM.**

(X) Transfer Mode

- Activated when a Transfer Key is pressed from the Emergency Mode. To cancel the transfer and return to the Emergency Mode, press the CANCEL Function Key.

(D) Disable Mode

- The APU can become disabled. When this occurs, the letter **D** flashes.
- When an APU becomes disabled, call the Service Response Center at **1-800-E911-HELP** (1-800-391-1435) to report the problem.

NOTE: If a "***PICK UP ANY LINE KEY TO STAY ACTIVE***" message appears, then pick up any line key.

AUTOMATIC LOCATION IDENTIFICATION (ALI)

The Automatic Location Identification (ALI) feature is activated by the ANI. When a call to 9-1-1 is made and ANI is activated, the database accesses the ALI information, which is the caller's location identification. The ALI information is then shown on a display screen.

An example of a typical ALI display looks like this:

```
RESD 12:10 11/12
(413) 555-2368
WILKINSON, CHRIS
      646
 GRAYLING RD

CANTON


ESN=571


CANTON POLICE
CANTON FIRE
CANTON RESCUE
```

The Automatic Location Identification (ALI) Unit monitor displays the:

1. Class of telephone service (e.g. Residence, Business, Mobile, Coin, etc.)
2. Time and Date the call was received
3. Calling party's telephone number
4. Calling party's name
   or
   VACANT...NO CALL BACK Location has "soft" dialtone which will allow the customer to only call the telephone company or 9-1-1 for emergency services. You can't dial back to the telephone number.
5. Calling party's address
6. Calling party's municipality
7. Disability Indicator
8. Emergency Service Number (ESN)
9. Three major Public and/or Private agencies covering the address:
   - Police
   - Fire
   - EMS/Rescue (Ambulance)

CLASSES OF TELEPHONE SERVICE

CODE	MEANING
RESD	Residence
BUSN	Business
PBXr	Resident PBX (Switchboard with OPR)
PBXb	Business PBX (Switchboard with OPR)
CNTX	Centrex (Switchboard without OPR)
$1WY	1 way coin phone (can't call back)
$2WY	2 way coin phone
PAY$	Coin phone (either 1 way or 2 way)
COIN	Coin phone (either 1 way or 2 way)
MOBL	Mobile/Cellular
RESX	Residence, off-premise extension (Same community)
BUSX	Business, off-premise extension (Same community)
FX	Foreign Exchange (Different exchange)

RESD . . . Residence telephone service.
BUSN . . . Business telephone service.
PBXr . . . A residence location with a Private Branch Exchange. A PBX location has an operator to connect the calls.
PBXb . . . A business location with a Private Branch Exchange. A PBX location has an operator to connect the calls.
CNTX . . . Centrex is a sophisticated PBX without an operator.
$1WY . . . A pay phone that you can't call back to.
$2WY . . . A pay phone that you can call back to.
PAY$ . . . Coin phone (either 1 way or 2 way)
COIN . . . Coin phone (either 1 way or 2 way)
MOBL . . Mobile or cellular telephone service.
RESX . . . A home that has an extension at another address in the same community.
BUSX . . . A business that has an extension at another address in the same community.
FX . . . . . Provides local telephone service from a telephone office outside of your exchange area.

DISABILITY INDICATOR

When a call to 9-1-1 is received, the name, address and other important information about the calling party is shown on the ALI Display. A Disability Indicator is one of the other pieces of information that may appear on the ALI Display.

The Disability Indicator advises the PSAP Telecommunicator that the caller may be unable to communicate and/or respond to messages, instructions and/or requests. The PSAP Telecommunicator must be aware of, and take all necessary steps to accommodate, callers whose ALI Display shows a Disability Indicator.

This indicator tells you that someone at that address is disabled, NOT necessarily the caller. Remember that this is a totally voluntary indicator.

The following table lists the Disability Indicators and their meaning.

INDICATOR	MEANING
LSS	**Life Support System** (someone at that address is linked to equipment required to sustain their life)
MI	**Mobility Impaired** (someone at that address is bedridden, uses a wheelchair or has another mobility impairment)
B	**Blind** (someone at that address is legally blind)
D H H	**Deaf & Hard of Hearing** (someone at that address is deaf or hard of hearing)
S I	**Speech Impaired** (someone at that address is speech impaired)
TTY	**Teletypewriter Device** (communication via the telephone with someone at this address may require using a TTY device)
DD	**Developmentally Disabled** (someone at that address has a cognitive disability)

Below is an example of an ALI Display, with a Disability Indicator shown.

```
RESD 12:10 11/12
(413) 555-2368
WILKINSON, CHRIS
      646
GRAYLING RD

CANTON
DHH
ESN=571

CANTON POLICE
CANTON FIRE
CANTON RESCUE
```

LOGGING ON/OFF

At the beginning of each shift, Telecommunicators should enter their personal I.D. number into the APU. This process is called LOG-ON. At the end of each shift, or when leaving the APU for breaks or lunch, the "LOG-OFF" should be performed. Do the following:

LOG-ON

ACTION	*RESULT*
1. APU must be in the idle (I) mode.	
2. Press and release the **MEM** key.	2. The ANI Display shows: **Programming. . .**
3. Press and release the Zero **(0)** (oper) key, followed by #.	3. The ANI Display shows **OPER#.**
4. Key in the 3-digit I.D. number (valid numbers 001-998), e.g. 135	4. The ANI Display shows the I.D. of the Telecommunicator as it is entered. When complete, ANI display shows, e.g. **OP:135.**

LOG-OFF

ACTION	*RESULT*
1. APU must be in the idle (I) mode.	
2. Press and release the **MEM** key.	2. The ANI Display shows: **Programming. . .**
3. Press and release the Zero **(0)** (oper) key, followed by #.	3. The ANI Display shows **OPER#.**
4. Key in the **0 0 0** (Zero three times)	4. The ANI Display shows the Log-Off I.D. as it is entered. When complete, ANI display shows, e.g. **OP:000.**

LINE PICK-UP KEYS

The APU is equipped with 20 Line Pick-Up Keys arranged in two 10 button rows in the lower half of the APU. Each key contains a red Light Emitting Diode (LED) and a green LED. The red LED is located to the left of the green LED. The Line Pick-Up Keys:

- Allow the connection of a line to the APU
- Both red and green LED's will illuminate when the Line Key is pressed
- The green LED will light only on the APU being used
- Only the red LED will wink when the line is on hold on all APU's
- Both LED's will extinguish when the Line Key is released by either:
    - replacing the handset on-hook, or
    - pressing the Release Key

The 9-1-1 Trunks are located on the left side of the top row of keys.

Red Green

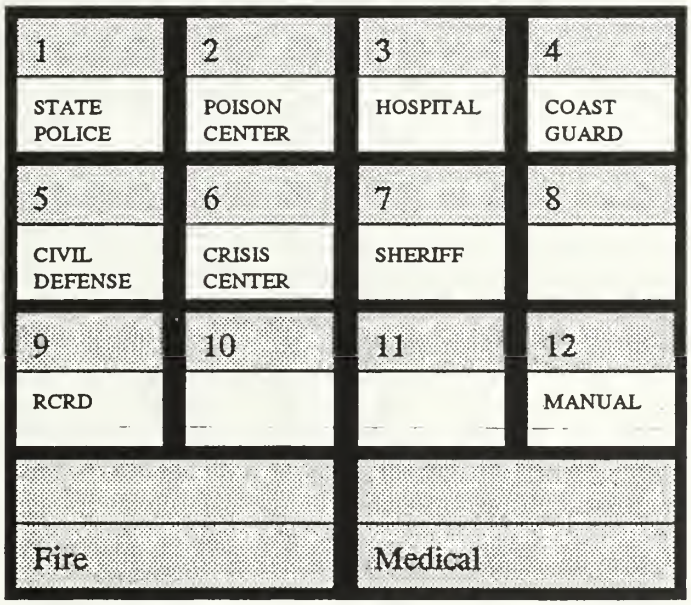
○ ○	○ ○	☼ ☼	○○	○○	○ ○	○ ○	○ ○	○ ○	○ ○
9-1-1	**9-1-1**	**9-1-1**	**9-1-1**						
○ ○	○ ○	○ ○	○ ○	○○	○ ○	○ ○	○ ○	○ ○	○ ○
2 Way		INTER PSAP							

SINGLE BUTTON TRANSFER KEYS

Single Button Transfer allows for the transfer of calls to other public safety agencies, usually in the same city or town. It also allows for the transfer of calls to specialized public safety agencies, usually serving many cities and towns, e.g. State Police or Coast Guard.

The Single Button Transfer Keys allow the user to transfer calls to another PSAP.

- The Keys are located on the upper half of the APU, to the left of the Dial Pad Keys.
- Many of the Keys will be programmed before each PSAP is installed.
- However, the Keys can be reprogrammed, as needed, at a later time.
- In Regional PSAP's, the Transfer Keys will be standardized to ensure uniformity.

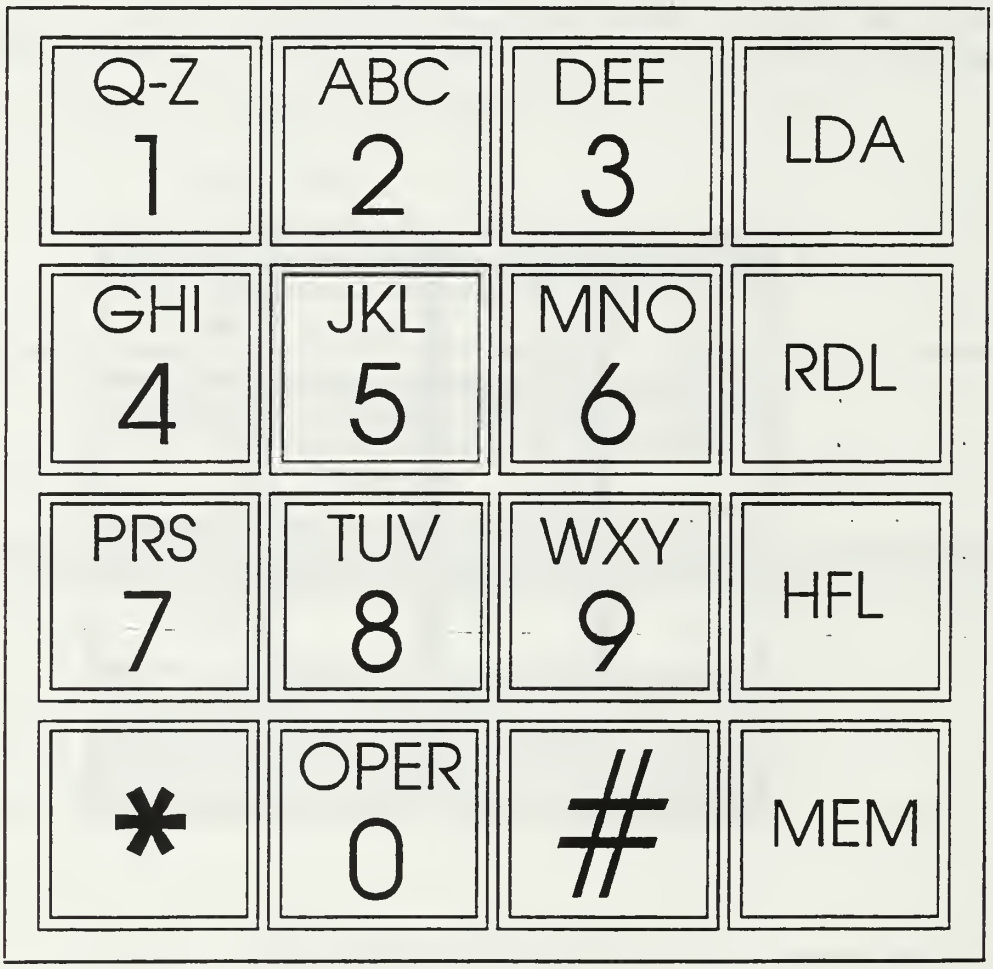


- The bottom two buttons are larger than the upper twelve keys.
- In most cases, the bottom two buttons will be marked **FIRE** and **MEDICAL.** (This may vary depending on the PSAP.)
- The larger buttons allow for easy touching, as these agencies receive the bulk of the transfers.
- "Recording" key used according to local standard operating procedures; intended to keep all emergency 9-1-1 lines free. (Can not be used with TTY calls)

DIAL PAD KEYS

The Dial Pad Keys are located in the upper half of the APU. The Keys are configured in the standard telephone touch-tone button dial pad, with the addition of four special keys.

The ten keys, 1 through 0, are used to dial telephone numbers as needed. The star (*) and pound (#) keys are used in conjunction with certain designated keys for special functions. Key # 1 has two letters, Q and Z, which do not normally appear on Dial Pads of standard telephone sets. Q and Z are shown to aid in programming.



The four Special Keys are used to support dialing functions. The Keys are:

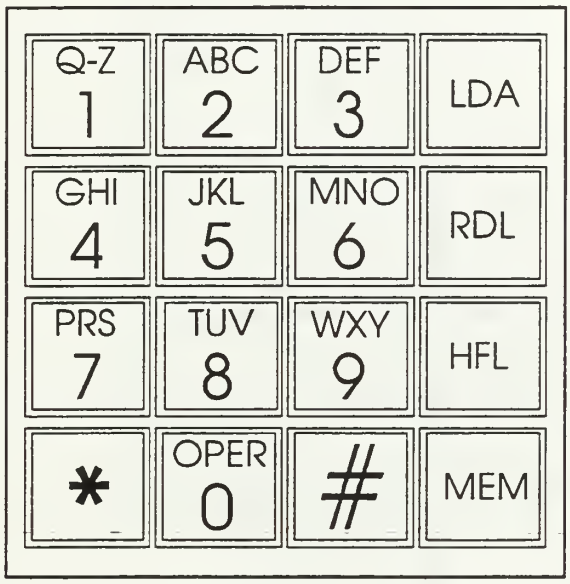
- LDA (Long Distance Access) **(NON-OPERATIONAL)**
- RDL (Redial)
- HFL (Hookflash)
- MEM (Memory)

DIAL PAD KEYS (cont'd)

LDA (Long Distance Access) Key (NON-OPERATIONAL)

RDL (Redial) Key

- When a telephone number is dialed, the APU stores the number in memory
- To redial the last number dialed, press the RDL Key when dial tone is heard.
- When pressed in the "Idle" mode the APU will display the last broadcast message received, if any.
- Backspace Correct Key
- The RDL Key can be used to redial a stored ANI.



HFL (Hookflash) Key

- The HFL Key works like the Hookswitch on a ordinary telephone.
- When pressed, the line is interrupted for a pre-set time (usually 0.5 seconds).
- It allows special features, such as 3-Way Calling, to be activated.

MEM (Memory) Key

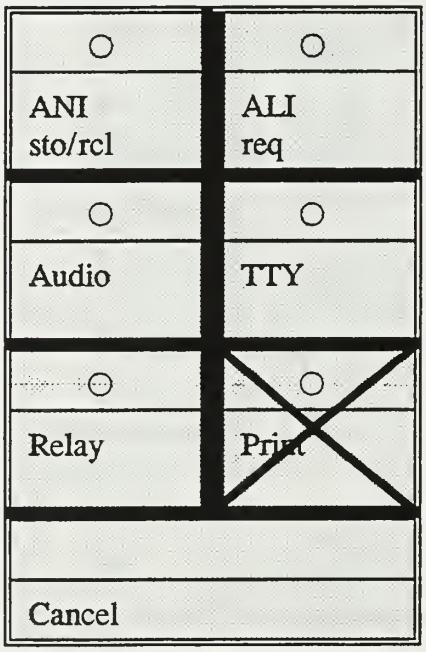
- It allows users to Log-on to the system.
- It allows users to access the TTY pre-programmed messages.
- It allows users to access the speed dial numbers programmed under button 12.
- It allows users to program Auto-dialer numbers and supervisory functions.
- To program, press and release the MEM Key while the handset is On-hook.
- To access the Auto-dialer numbers or the setup functions, press and release the MEM Key plus the two digit speed dial code number with the equipment Off-hook. For example, MEM 10

FUNCTION KEYS

The APU contains twelve miscellaneous Function Keys. They offer additional features to make the processing of 9-1-1 calls easier.

Seven of the twelve Function Keys contain a green LED, which illuminates when that function is selected. The MAARS system allows twenty seconds to perform the function. If a function is not performed in the 20 seconds, the APU returns to its former state.

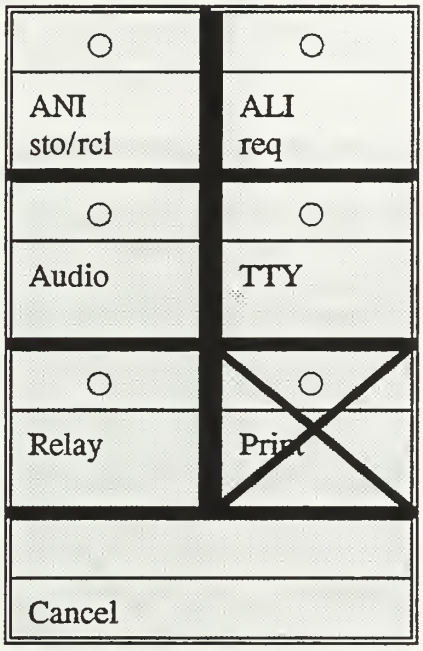
ANI Sto/Rcl Stores up to five ANI/ALI. This must be done during a 9-1-1 call. Recall the ANI/ALI when in the Idle or Administrative mode.



FUNCTION KEYS (cont'd)

ALI Req Allows for an ALI to be re-sent.

AUDIO Raises and lowers, or disables entirely, the ringing pitch and audio volume. It can be activated when the handset is On or Off-hook. The audio volumes return to normal when the emergency call is released.



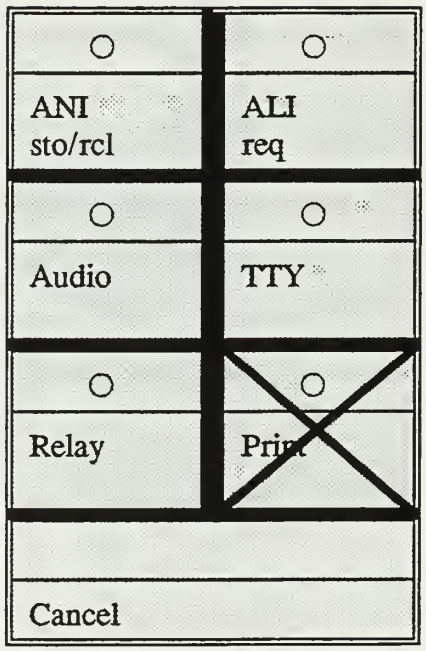
FUNCTION KEYS (cont'd)

TTY To enter or exit TTY mode manually, press the TTY key twice.

RELAY This key will only be used in Massachusetts to silence the alarm. Press the RELAY key, then press 000 on the Dial Pad to silence the alarm.

PRINT Prints the ANI/ALI's on request. The LED will stay lit as long as a message is waiting to print.

CANCEL Allows the user to terminate transfers and system functions. For example, the sequence **Print** and **Cancel** clears all print requests.



FUNCTION KEYS (cont'd)

The remaining five function keys are:

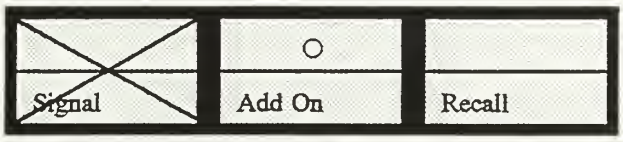
SIGNAL This key is not being used in Massachusetts.

ADD ON This key allows you to add another party to your existing call.

For Example: You receive an emergency call on a 9-1-1 line. You may then transfer the call to FIRE (3 parties on the line). Then you decide to "add on" another party. It is suggested that you put the 9-1-1 call on hold. Hit the add on key, go to an outside line for dial tone, and dial the number. You now have 4 parties talking.

RECALL Provides a new dial tone, without releasing the line.

This button is not to be used on a 9-1-1 line.



HOLD Places a call on Hold.

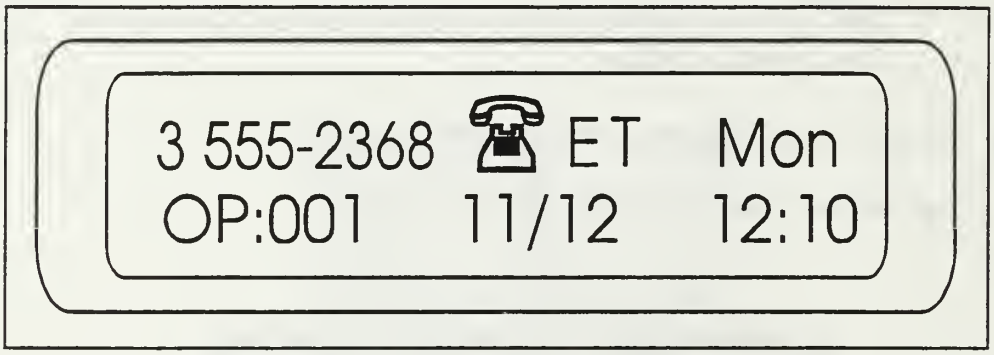
RELEASE Disconnects a line from the APU.

TTY OPERATION

A TTY call can be received in either the **A** (Administrative) or **E** (Emergency) Mode. When the APU detects a TTY call, the following will occur:

- The top row (Line 1) of the ANI Screen will display a flashing **T**.
- An audible **tweedling** will sound on the handset and APU speaker for the first ten (10) seconds.

The ANI display will look like this:



After pressing the Line Key to answer the call, the following can occur:

- In the **E** (Emergency) Mode, a **TTY** call can be transferred to another **PSAP**, or to a console with a Teletype (TTY) terminal. TTY calls can only be transferred to locations with TTY capability.
- A pre-programmed message can be sent to the calling party.
- The bottom row of the ANI screen displays **INCOMING** messages in Uppercase letters and **OUTGOING** messages in Lower-case letters.
- A TTY keyboard interface will be connected to the APU to allow direct keyboard communication.

If the call is a "Silent Call", press the **TTY** key **TWICE** to enter the TTY function and to send the first message.

If the call is a TTY call (the tweedling sound is heard), the APU will automatically go into the TTY function and send the first message. **DO NOT TOUCH THE TTY KEY!**

TTY PREPROGRAMMED MESSAGES

Using Preprogrammed messages will save time when TTY calls are received. The TTY keyboard is available to use when preprogrammed messages are not suitable. The following messages have been preprogrammed in the MAARS system.

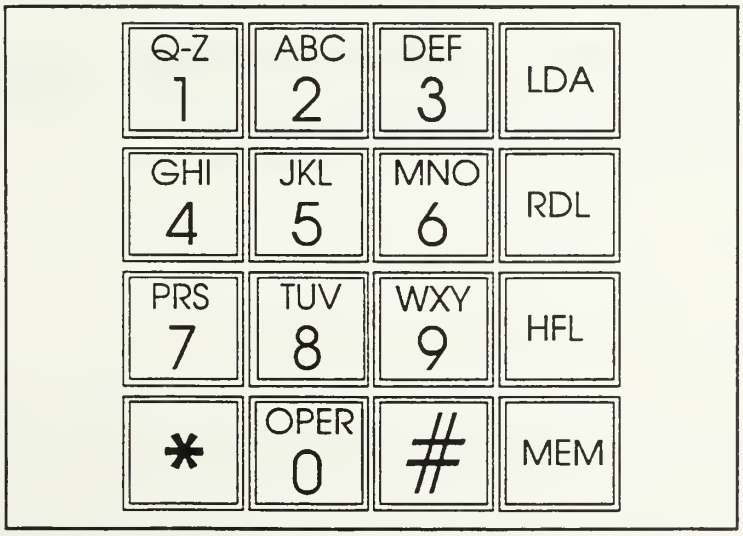
To send a message:

1. Press MEM* plus the message number.

	MESSAGE
0	9-1-1 nd polce fire amblnce q ga
1	(printr on) what ur address q ga
2	what is ur name q ga
3	what is ur phone number q ga
4	help is on the way ga
5	pls repeat ga
6	must transfr ur call pls hold ga
7	stay where u are ga
8	dont hang up ga
9	thank u bye ga to sk

For example:

- **MEM*4** will cause the *help is on the way ga* message to be sent.



TTY ABBREVIATIONS

COMMON TTY ABBREVIATIONS	
ASAP..as soon as possible	CUD..could
HD..hold	FONE..phone
INFO..information	MIN..minute
MSG..message	NXT..next
NBR..number	TMW..tomorrow
OK..Okay or all right	IMPT..important
PLS..please	
HOSP..hospital	OPR..operator
U..you	WUD..would
UR..you	SHUD..should
XXX..mistake, misspelling, change of thought	BLDG..building
PBLM..problem	DR..doctor
THX..thanks	THOT..thought

ga	go ahead
q	question
sk	stop keying
u	you
ur	your

REVIEW EXERCISE

DIRECTIONS: Fill in the blanks.

1. The Answering Position Unit is also known as an _ _ _.

2. A _ _ _ keyboard is attached to both models of the APU.

3. The first thing you do when you sit at your APU is _ _ _ _ _ and _ _ _ _ _ _ when you leave.

4. Each _ _ _ _ _ _ _ _ - _ _ key has a red and green light.

5. The _ or ANI operates by using the calling party's telephone number to access a database.

6. The letter A denotes the _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ Mode.

7. The letter E denotes the _ _ _ _ _ _ _ _ _ _ Mode.

8. The letter I denotes the _ _ _ _ Mode.

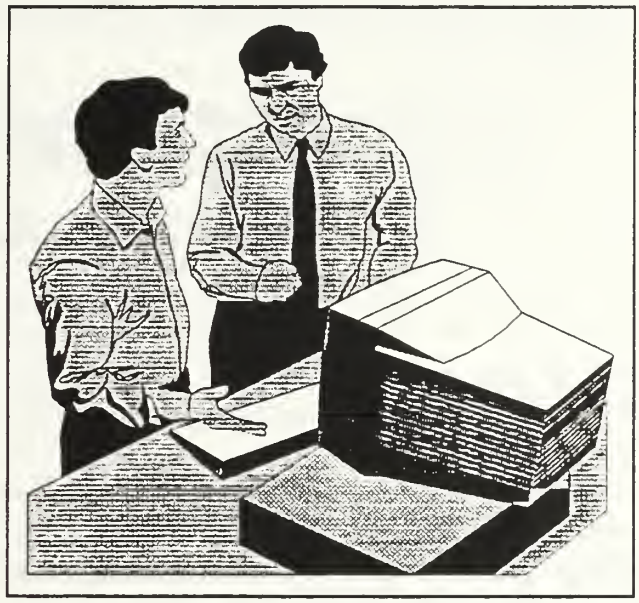
9. The Service Response Center or _ _ _ should be called when an APU is disabled.

10. The Automatic Location Identification or _ _ _, provides the caller's name and address.

SERVICE RESPONSE CENTER (SRC)

CONTENTS

SERVICE RESPONSE CENTER (SRC)



The Service Response Center (SRC) is located in North Andover, MA. The SRC has responsibility for monitoring the 9-1-1 network and handling problems with the system. The SRC acts as a referral center and resource for system users. ANY problems with the system must be referred to the SRC for corrections.

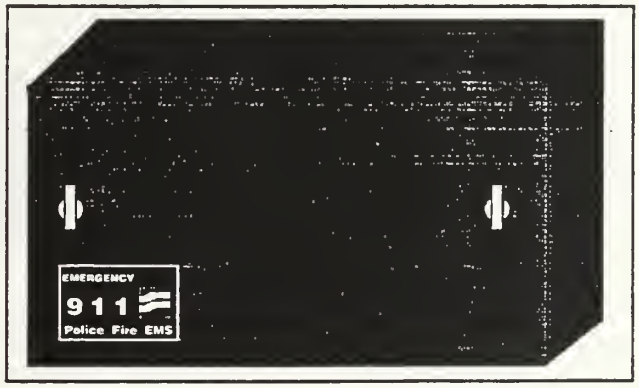
The SRC's telephone number is

1-800-E911-HELP

(1-800-391-1435).

Telecommunicators must call the SRC anytime they have questions about anything relating to E 9-1-1.

CONTROL CABINET



The MAARS Control Cabinet will be located in the equipment room or similar site within the PSAP. The Control Cabinets and associated wiring fields contain all the circuit boards, power supplies and trunk and line connections for the 9-1-1 lines working in the PSAP.

The Control Cabinets will be wall-mounted units. The cabinets and the equipment within are designed to minimize on-site maintenance. The maintenance should be handled by authorized personnel only. The only exception to this may arise when remote assistance is requested by a representative of NYNEX, PEI or the SETB.

If you have any questions or problems, call the SRC.

9-1-1 SYSTEM ALARM MESSAGES

The MAARS system is designed to monitor and detect system malfunctions. When this occurs:

- Visual and audible alarms will be activated to warn PSAP Telecommunicators of the condition.
- The system printers will print the alarm messages.
- Each line of the alarm message displays the Remote Maintenance Unit (RMU) ID number and the source of the alarm.
- The Telecommunicator can silence the alarm by pressing RELAY 000.
- **IN ADDITION, ALL ALARMS MUST BE REPORTED IMMEDIATELY TO THE SRC.**

ALI DISCREPANCY FORM

The E 9-1-1 ALI Discrepancy Form is provided by NYNEX to record and report all ALI discrepancies. Use the following procedures:

- The PSAP Telecommunicator should complete an ALI Discrepancy Form when an actual discrepancy appears on the ALI screen. This includes:
  - Incorrect information displayed
  - No record found
  - Misrouted calls
- The form should **NOT** be used unless the information displayed would clearly inhibit the PSAP dispatch operation if no information could be obtained from the caller.
- Use the sample form and instructions on Pages 3-10 thru 3-17 to complete the form. Note that some portions of the form should be left blank as they are for NYNEX use only.
- The completed ALI Discrepancy Form should be given to the Municipal Database Liaison for validation and verification.

  IMPORTANT: The Municipal Database Liaison's signature is required on the form indicating that the information has been reviewed and validated. Only the signature of the Liaison of record will be accepted. If the signature is not on the form, it will be returned unworked.
- The Municipal Database Liaison should fax the completed form to the NYNEX E 9-1-1 DMC (Data Management Center) at **(800) 839-6020** for input into the database. If you wish to send written correspondence, the address is:

  Staff Manager, E 9-1-1 Data Management Center
  326 North Main St. 3rd Floor
  Fall River, MA 02720
- Incomplete or unclear Forms will be returned by NYNEX to the Municipal Database Liaison for clarification.
- Upon completion of an ALI Discrepancy Form by the NYNEX E9-1-1 Data Management Center, the disposition will be clearly noted on the Form. A copy will then be returned to the Municipal Database Liaison for acceptance.
- A log will be maintained by NYNEX E 9-1-1 Data Management Center to track discrepancies received from the Municipal Database Liaison. A control number will be assigned to each discrepancy for this purpose.

ALI DISCREPANCY FORM (cont'd)

The ALI Discrepancy Form looks like this:

NYNEX.

Enhanced 9-1-1
ALI Discrepancy

Originated by:

Name: _____ Control # _____
For NYNEX Use

PSAP Name _____ Date _____

County _____ Time _____

Incorrect Name	☐	Incorrect House Number	☐	Incorrect Street	☐
Incorrect Community	☐	Incorrect Location	☐	Incorrect ESN	☐
Misrouted Call	☐	Other (Explain)	☐	_____	

_____

_____

ALI Screen Display**	Display Should Read
Tel. # _____	Tel. # _____
Name _____	Name _____
Address _____	Address _____
Community _____	Community _____
Location _____	Location _____
ESN _____	ESN _____
Other _____	Other _____
** Note: Attach printout of ALI screen if desired.	Source of Correction _____

For Use:

Case Corrected on: Date _____ Municipal Data Liaison

_____ _____
Signature

Remarks _____

_____ Date _____

NSC E911 A
Revised 1/95

FAX Completed Form To:
E9-1-1 Data Management Center
1-800-839-6020

INSTRUCTIONS FOR FILLING OUT THE ALI DISCREPANCY FORM

1. Origination Data

Name - Name of the telecommunicator who answered the 9-1-1 call.

PSAP Name - Name of the Primary or Regional PSAP.

County - County in which the PSAP resides.

Date, Time - Date and Time of the 9-1-1 call.

Control # - Leave blank - FOR NYNEX USE ONLY

2. Type of ALI Discrepancy

Check each box that applies. If Other box is checked, use the lined space below the boxes to explain why this form is being forwarded to NYNEX. This lined space may also be used to explain any other box that has been checked.

3. ALI Screen Display

Tel. # - The telephone number of the caller that appears on the ALI screen.

Name - The name of the resident or business that appears on the ALI screen.

Address - The address of the resident or business that appears on the ALI screen.

Community - The community name of the resident or business that appears on the ALI screen.

Location - Any location information that appears on the ALI screen.

ESN - The three-digit number that appears on the ALI screen.

Other - Any other information that appears on the ALI screen that is relevant to the discrepancy.

INSTRUCTIONS ON FILLING OUT THE ALI DISCREPANCY FORM

3. ALI Screen Display, cont.

Note - A printout of the ALI screen showing the discrepancy may be submitted with the Form.

4. Display Should Read

This section is used to advise the E9-1-1 Data Management Center as to what information **should** be on record in the database. Use the instructions in Section 3 to fill out this section, substituting the **correct** information as opposed to information that was shown on the ALI screen.

Source of Correction - Use this field to record the source of the correct information that was entered above.

5. Municipal Database Liaison Signature

The ALI Discrepancy Form should be forwarded to the Municipal Database Liaison for validation.

Once the Form has been signed by the Municipal Database Liaison, it should be forwarded to the NYNEX E9-1-1 Data Management Center for disposition.

6. Disposition Information

When the NYNEX E9-1-1 Data Management Center has completed the work in the database, this section will be filled out by a member of the E9-1-1 Data Management Support Staff and returned to the Municipal Database Liaison.

Some points to consider when filling out the Form

1. On some occasions, a resident may go to another location to report the emergency. When the telecommunicator verifies the address information as displayed on the screen with the caller, the person may give their own home address instead of the actual address the caller is placing the call from.

   In this case, please do **not** submit an ALI Discrepancy From as NYNEX will incorrectly change the address of the resident.

2. Be sure that the **Display Should Read** section is filled out completely and accurately in order to avoid having the Form returned to the Municipal Database Liaison, thus delaying a correction.

3. A form without the signature of the Municipal Database Liaison of record **will be returned unworked by NYNEX.**

Changes in Municipal Database Liaison

To change the Municipal Database Liaison of record, the following information should be sent to the NYNEX E9-1-1 Data Management Center:

A letter of authorization signed by a Municipal Official naming the new liaison, title, address (including zip code) and telephone number.

- Forward letter to:

Associate Director - E9-1-1 Data Management Center
326 North Main Street, 3rd Floor
Fall River, MA 02720

PROBLEMS ASSOCIATED WITH ALI DISCREPANCIES

Following are examples of problems (and resolutions) referred to the E9-1-1 Data Management Center:

1. The Municipal Database Liaison signature was missing from the completed ALI Discrepancy Form. In all instances, address revisions must be verified and noted by the liaison.

   - If a signature stamp is used, note initials in ink.

   - If the address belongs in another town, the Municipal Database Liaison of that town needs to sign the form.

2. The PSAP does not need to notify NYNEX of customer address changes due to moves. When the customer moves into the new location, the E9-1-1 database is updated automatically by the internal service order process.

3. Different Premis Address (DPA) - When a customer has a telephone that rings in two different locations, a separate class of service indicator is noted in the E9-1-1 database. This will be displayed to the telecommunicator as an "X" after the class of service (e.g., RESX, BUSX). This indicator should prompt the telecommunicator to ask which location the caller is placing the call from since only one address is displayed on the screen.

4. When verifying the caller's address, the telecommunicator often does not distinguish between an actual address discrepancy and a caller who is using a telephone from another location to report an emergency. The caller's address needs to be substantiated before submitting an ALI Discrepancy Form.

5. The "DISPLAY SHOULD READ" portion of the ALI Discrepancy Form needs to be filled out **completely**. If the telecommunicator has been told that the address on the screen is incorrect and cannot provide the correct information, the form should be given to the Municipal Database Liaison for investigation.

PROBLEMS ASSOCIATED WITH ALI DISCREPANCIES, CONT.

6. Street name spelling in the "DISPLAY SHOULD READ" section should match the spelling on the MSAG. If it doesn't, the E9-1-1 Data Management Center assumes either a new street is being added to the MSAG or the current spelling requires a revision.

7. ALI Discrepancy Forms should be used **only** when an address inconsistency arises from an actual 9-1-1 call. All other database issues should be referred, in writing, to the E9-1-1 Data Management Center.

8. The MSAG Update Form should be used to update MSAG information after conversion. Contact the E9-1-1 Data Management Center for a supply of these forms, if needed.

9. The E9-1-1 Data Management Center is responsible **solely** for address discrepancies. All other concerns including equipment troubles, out-of-service conditions, etc., should be referred to the Service Response Center at the 800-E911-HELP line (or 800-391-1435).

REFERENCE

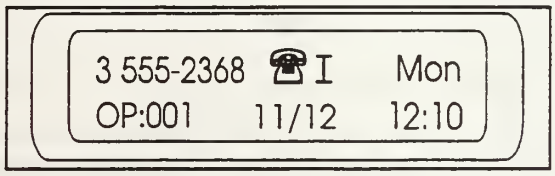
CONTENTS

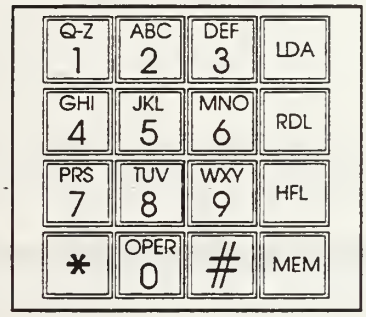
LOGGING ON / OFF

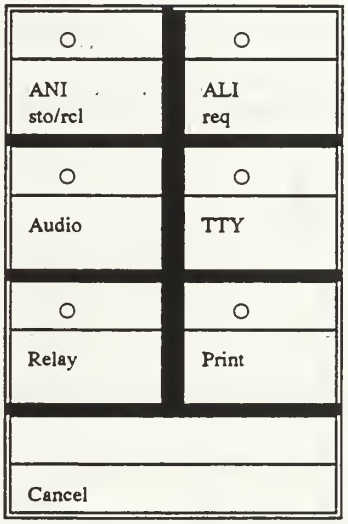
At the beginning of each shift, Telecommunicators should enter their personal I.D. number into the APU. This process is called LOG-ON. At the end of each shift, or when leaving the APU for breaks or lunch, the "LOG-OFF" should be performed. Do the following:

LOG-ON

	ACTION		*RESULT*
1.	APU must be in the Idle (**I**) mode.		
2.	Press and release the **MEM** key.	2.	The ANI Display shows: **Programming. . .**
3.	Press and release the Zero (**0**) (oper) key, followed by # .	3.	The ANI Display shows **OPER#** .
4.	Key in the 3-digit I.D. number (valid numbers 001-998), e.g. 135	4.	The ANI Display shows the I.D. of the Telecommunicator as it is entered. When compete, ANI display shows, e.g. **OP:135**







LOG-OFF

	ACTION		*RESULT*
1.	APU must be in the Idle (**I**) mode.		
2.	Press and release the **MEM** key.	2.	The ANI Display shows: **Programming. . .**
3.	Press and release the Zero (**0**) (oper) key, followed by # .	3.	The ANI Display shows **OPER#** .
4.	Key in the **0 0 0** (Zero three times)	4.	The ANI Display shows the Log-Off I.D. as it is entered. When compete, ANI display shows, e.g. **OP:000**

ANSWER AN INCOMING CALL

An incoming call is indicated by and handled with this procedure:

ACTION		RESULT	
1.	Observe the red LED on the Line Key flashing at 60 Intervals per Minute (IPM). Listen for an interrupted audible (tone ringer) signal.	1.	Verify the flashing line key.
2.	Momentarily press the flashing line key. (With the headset , the line will be connected.)	2.	Observe the line key's green and red LED's illuminate steady. The line is connected to the APU. Other APU's will have only the red LED illuminated steady. With an optional Call Sequencer, the longest waiting call is indicated by a fluttering (330 IPM) red LED. (ONLY AVAILABLE WITH 4 OR MORE APU'S.)
3.	Acknowledge the calling party. (Note: The handset may be lifted either before or after the selection of the line key.)		

1.

O O	O O	O O	O O	O O	O O	O O	O O	O O	O O
9-1-1	9-1-1	9-1-1	9-1-1						
O O	O O	O O	O O	O O	O O	O O	O O	O O	O O
2 WAY		INTER PSAP							

2.

☼ ☼	O O	O O	O O	O O	O O	O O	O O	O O	O O
9 -1-1	9-1-1	9-1-1	9-1-1						
O O	O O	O O	O O	O O	O O	O O	O O	O O	O O
2 WAY		INTER PSAP							

TRANSFERRING A 9-1-1 CALL

Transferring a call enables a PSAP to connect the calling party with the proper agency to administer the emergency. When the transfer is complete:

- The calling party, the originating PSAP and the transfer PSAP will all be communicating. In most cases, the PSAP originating the transfer will hang-up, thus leaving the calling party and the transfer PSAP agency in communication.

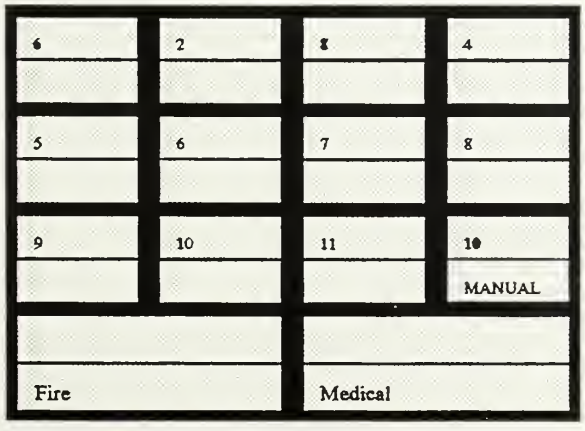
The following guidelines apply to transfers:

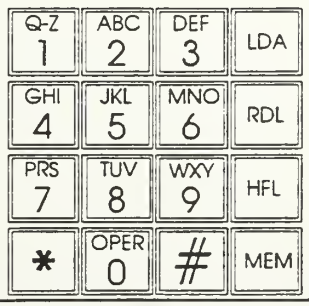
1. During a three-way conversation, any party (including the calling party) may hang-up, leaving the remaining parties communicating.

2. If the calling party is still on the line with the original PSAP, that PSAP may initiate another call, after cancelling the original transfer.

NOTE: TTY calls can only be transferred to PSAP locations equipped to handle TTY calls.

ACTION	*RESULT*
1. Advise the calling party that you are going to add a third person to the conversation.	1. Calling party anticipates third party participation.
2. Press the desired *Single Button TRANSFER* key. **OR** Press the **XFER (12)** button then dial the full 7 or 11 digit number by using the Dial Pad Keys. **OR** Press the **XFER (12)** button then the **MEM** key and the 2 digit speed dial code by using the Dial Pad Keys.	2. The system transfers the call to the desired location, and the APU screen displayed the selected transfer location name.

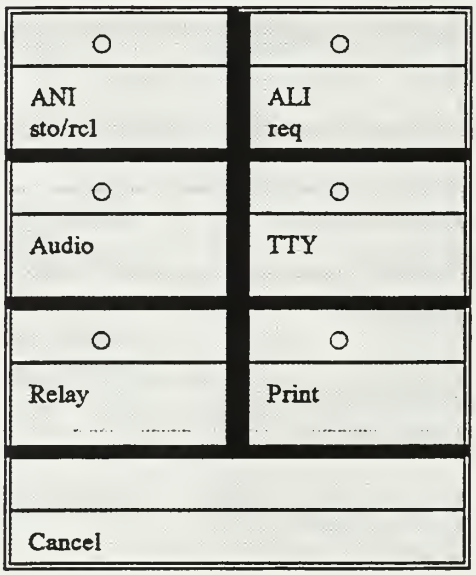




CANCELLING A FUNCTION

The Cancel Key allows the user to terminate transfers and system functions. Use the Cancel key to terminate the following functions.

- Call Transfers
- Audio functions such as changing the ring volume or pitch
- ANI/ALI print requests
- ANI recall deletion
- Set-up programs

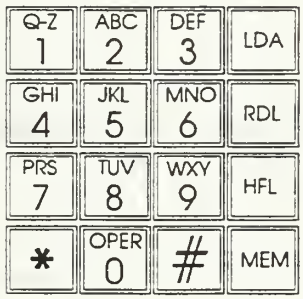


OUTGOING CALL (Normal Dialing)

The APU can be used to dial an outgoing call on the outside line. To place an outside call from the APU, perform the following:

	ACTION		*RESULT*
1.	Press the Outgoing 2 Way Emergency Line Pick Up Key.	1.	Listen for dial tone. Observe red and green LED's illuminate steady.
2.	Enter the desired telephone on the dial pad.	2.	Verify the entered number on the ANI screen.

O O	O O	O O	O O	O O	O O	O O	O O	O O	O O
9-1-1	9-1-1	9-1-1	9-1-1						
O O	O O	☼ ☼	O O	O O	O O	O O	O O	O O	O O
2 WAY		INTER PSAP							



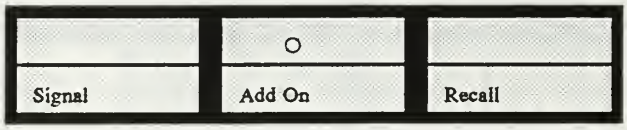
RECALL

The Recall Key allows the user to recall the dial tone, without releasing a selected line.

!!!! NOTE: THIS FUNCTION IS NOT TO BE USED ON 9-1-1 TRUNKS. The 9-1-1 trunks are not designed to allow this feature to be activated.

Do the following:

ACTION	*RESULT*
1. Press the ***RECALL*** key for approximately 2 seconds.	1. Listen for new dial tone. Verify the red and green LED's remain illuminated on the selected line key.



PLACING A CALL ON HOLD

The HOLD key allows the user to place a call on Hold. Do the following:

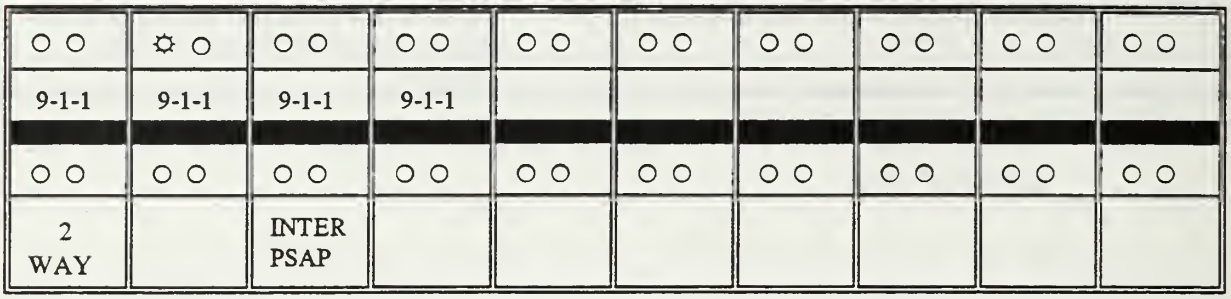
	ACTION		*RESULT*
1.	Press the ***HOLD*** key momentarily. The Telecommunicator may now answer or originate another call.	1.	The red LED changes from steady to winking (120 IPM) and the green LED lamp extinguishes. (See Note)
2.	To reenter the call placed on hold, press the winking line key.	2.	The call on hold is reentered. The winking red LED turns to a steady red and the green LED lamp illuminates.

*** Note All remaining APU's in the system will have a winking red LED on the line placed on hold.

○ ○	☼ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○
9-1-1	9-1-1	9-1-1	9-1-1						
○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○
2 WAY		INTER PSAP							

HOLD RECALL

A call placed on hold for more than 60 seconds will change from a winking red LED to a fast-flash (120 IPM) indication.



DISCONNECTING A CALL

To disconnect a call, either:

- Place the handset in its cradle.
- Press another line key.
- Press the **Release** Key.

NOTE: When using a headset, either press another line key or press the **Release** key.

ACTION	*RESULT*
1. Press the **RELEASE** key.	1. Call is disconnected.
	2. The steady red and green LED's are extinguished.

FORCED DISCONNECT

Forced Disconnect is a term used to describe the act of forcing a call to be disconnected from the APU. Forced Disconnect may need to be used by PSAP Telecommunicators during times of high call volume. The goal of using Forced Disconnect would be to make the 9-1-1 trunks idle as quickly or as soon as possible, and thus available for more calls.

Press the **RELEASE** key to perform a Forced Disconnect.

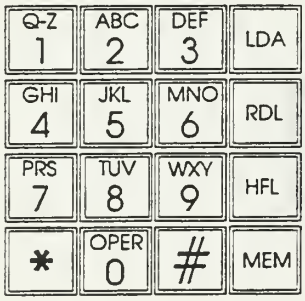
THREE-WAY CONFERENCE

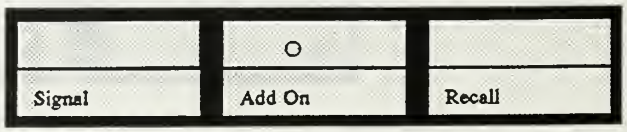
HOOKFLASH FUNCTION

	ACTION		*RESULT*
1.	Answer the incoming call on the 2 Way Emergency Line.	1.	Connect with the caller.
2.	Press the **HFL** key.	2.	Places the caller on temporary hold.
3.	Dial the desired number on the Dial Pad Keys.	3.	Connects the third party on the line.
4.	Press the **HFL** key again.	4.	Unites all three callers on the same line.
5.	Press the **HOLD** key to come out of the calling loop.	5.	Maintains the calling loop.
6.	Press the **RELEASE** key to disconnect the calling loop.	6.	Makes the 2 Way Emergency Line available again.

ADD-ON

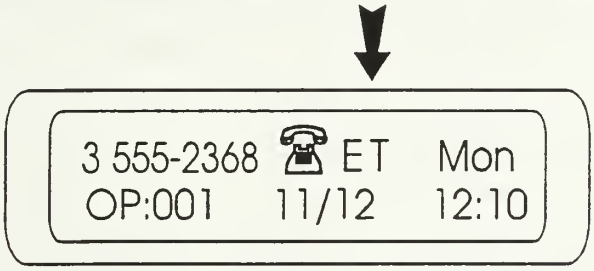
	ACTION		*RESULT*
1.	Answer the incoming call.	1.	Connect with the caller.
2.	Press the **HOLD** key.	2.	Places the caller on hold.
3.	Press the **ADD-ON** key.	3.	Allows for another caller to be added to the conversation.
4.	Access the Outgoing 2Way Emergency Line.	4.	Provides dial tone to make an outgoing call.
5.	Dial the desired number using the Dial Pad Keys.	5.	Connects the third party on the line.
6.	Press the **original Line Pick Up Key** that the call came in on.	6.	Reconnect with the original caller.
7.	Press the **ADD-ON** key then the **RELEASE** key to disconnect the calling loop.	7.	Makes all lines available again.





TTY CALL HANDLING

When the ANI Display shows a flashing "T", the APU is in the TTY mode. This may occur both on 9-1-1 (Emergency mode) and 7-digit line (Administrative mode).



The APU detects tone and sends a message back to the TTY caller. When the caller enters text, the text is displayed on line 2 of the ANI display and also on the ALI screen. The text appears as entered, by the calling party. The screen cannot be scrolled forward or backwards.

Incoming TTY text is displayed in **UPPER-CASE** and outgoing text in **lower-case** letters.

To toggle between ALI and TTY text, **first** depress the *TTY function* key and then press the *ALI req* key.

Note:

- If a TTY caller *DOES NOT* depress the space bar on the TTYkeyboard, the call will be handled as a silent call. This means that after a few seconds, the Telecommunicator must press the **TTY function** key *TWICE* to enter the TTY mode and automatically send the first preprogrammed message.

-or-

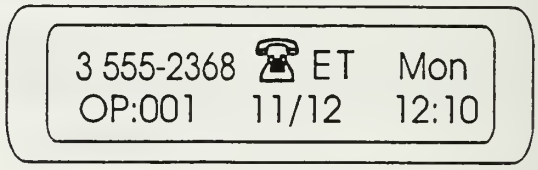
- If the TTY user hits the space bar or a key on the TTY keyboard an audible tweedling sound is detected on an incoming call.. You should **DO NOTHING.** The APU will automatically go into TTY mode and send the first pre-programmed message.

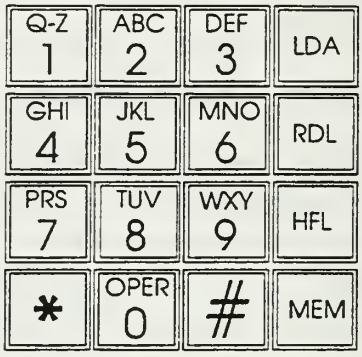
TTY PREPROGRAMMED MESSAGES

The MAARS APU has ten (10) preprogrammed messages (32 character limit). The preprogrammed messages will be built into the APU's at the time of installation.

The following preprogrammed messages have been installed in the MAARS system, in **lower-case letters.**

	MESSAGE
0	9-1-1 nd polce fire amblnce q ga
1	(printr on) what ur address q ga
2	what is ur name q ga
3	what is ur phone number q ga
4	help is on the way ga
5	pls repeat ga
6	must transfr ur call pls hold ga
7	stay where u are ga
8	dont hang up ga
9	thank u bye ga to sk





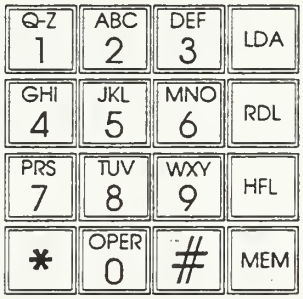
To send a pre-programmed message, do the following:

	ACTION		*RESULT*
1.	Some indication of a TTY incoming call.	1.	ANI screen flashes **T** and/or high-pitched chirping sound is heard.
2.	During the TTY call, press and release the *MEM* Key.	2.	*MEM* functions >
3.	Enter *	3.	*MEM* functions > *
4.	Key in the message number (0 to 9)	4.	Line 2 of the APU ANI screen displays the outgoing message in **lower-case** letters.
4.	Repeat steps 2 to 4 to repeat a message, complete a message, or to send a new message.		

INITIATING A TTY CALL

The PSAP Telecommunicator can manually enter the TTY mode when necessary. Do the following:

	ACTION		*RESULT*
1.	Access the Outgoing 2 Way Emergency Line.	1.	Verify the ANI screen displays an A Mode indicator.
2.	Press the *TTY* key twice.	2.	Verify the ANI screen displays a flashing "T" next to the Mode indicator and a TTY call on the second line.
3.	Dial the desired number using the Dial Pad Keys.	3.	Wait until the TTY caller answers the phone.



USING THE TTY KEYBOARD

If preprogrammed messages are inadequate to handle TTY calls, the TTY keyboard may be used. While in TTY Mode, the keyboard may be used at any time to send messages.

	ACTION		*RESULT*
1.	Type the message on the TTY keyboard.	1.	Verify the Outgoing TTY message on the ANI screen or ALI display in lower-case letters.
		2.	Verify caller response in UPPER-CASE letters.

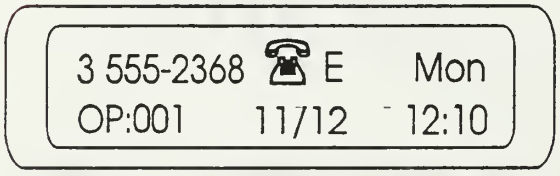
NOTE: Remember to toggle between the TTY text and the ALI. Press the **TTY** key and the **ALI req** key.

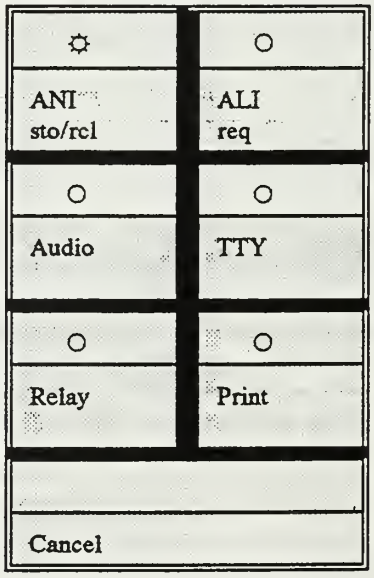
ANI STORE

While handling a 9-1-1 call, five (5) sets of ANI/ALI data may be stored. The stored data:

* Is the same data that is displayed on the ANI screen and/or ALI monitor.
* May be recalled at a later time.
* Is maintained in the most recent first format. When the memory is full and more data is be stored, the oldest data is erased.

ACTION	*RESULT*
1. To store a displayed ANI, press the *ANI sto/rcl* Key.	1. The ANI screen displays the entered number.
	2. The ANI screen displays: ANI #1 (to ANI #4) and the green LED on the *ANI sto/rcl* Key remains illuminated. This indicates an ANI is stored.



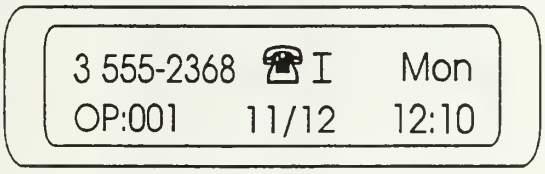


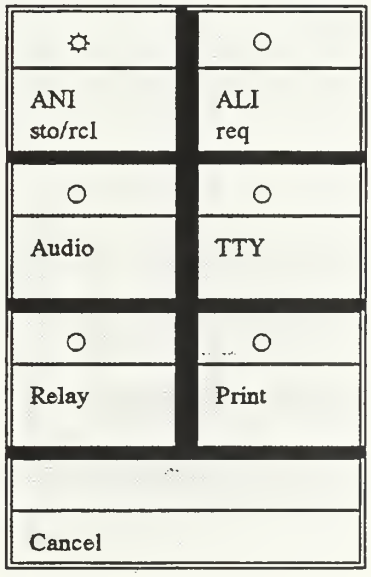
ANI RECALL

With the ANI information stored in memory, one of the following functions can be performed within TWENTY (20) seconds of pressing the *ANI sto/rcl* Key:

- Initiate an ALI request
- Redial the ANI
- CANCEL (delete) the entry from memory.

	ACTION		*RESULT*
1.	Release/disconnect from any call.	1.	APU remains in Idle Mode.
2.	Press the *ANI sto/rcl* Key.	2.	If ANI memory is empty, ANI screen displays: "* NO ENTRY *". If ANI memory is not empty, the ANI screen displays the most recently stored ANI: "ANI #2 > 35559707" (20 sec.) then *TIMED OUT*. The ALI monitor displays the first 7 lines of the corresponding ALI.
3.	Press the *ANI sto/rcl* Key to scroll (one by one) through the ANI library.	3.	Verify the scrolling ANI in a numerically decreasing sequence.
4.	Within TWENTY (20) seconds of recalling the ANI/ALI data, the user can: • Request an ALI • Redial the ANI • Cancel from memory	4.	See chart on next page...



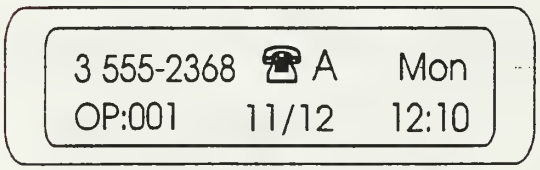


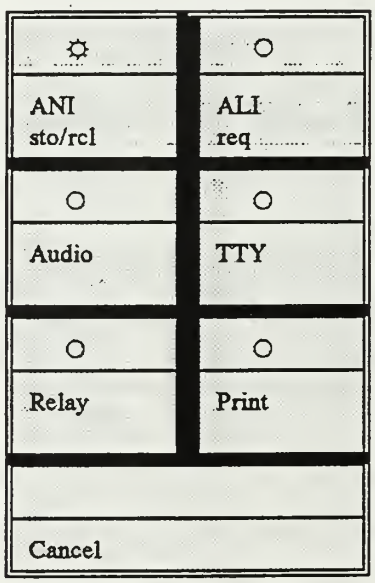
ANI RECALL (cont'd)

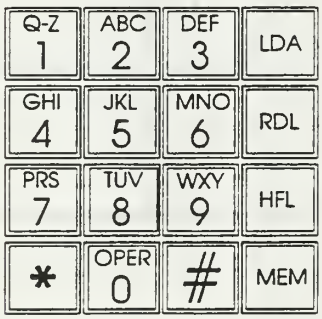
The chart from the prior page continues.....

ACTION	*RESULT*
A. REDIAL the ANI: 1. Select a 7-digit line.	1. Listen for dial tone. **NOTE:** 9-1-1 lines do not have dial tone.
2. Request ANI by pressing ANI STO RCL key.	2. ANI STO RCL displays the most recently stored ANI.
3. Press the **RDL** key or manually dial.	3. The APU generates the proper tones. The ANI display shows the 7-digit number as it is dialed, e.g. **5551296**.
B. DELETING the ANI/ALI Entry: 1. In the Idle or Administrative Mode, scroll through the ANI library in decreasing numerical sequence.	1. After scrolling through the library, verify Function mode changes to "**I**" (Idle mode) on ANI screen.
2. Press the ***CANCEL*** Key to clear the ALI displayed and the stored ANI/ALI from memory.	2. ALI clears from memory.

The green ***ANI sto/rcl*** LED will be lit as long as there is at least one entry in memory.





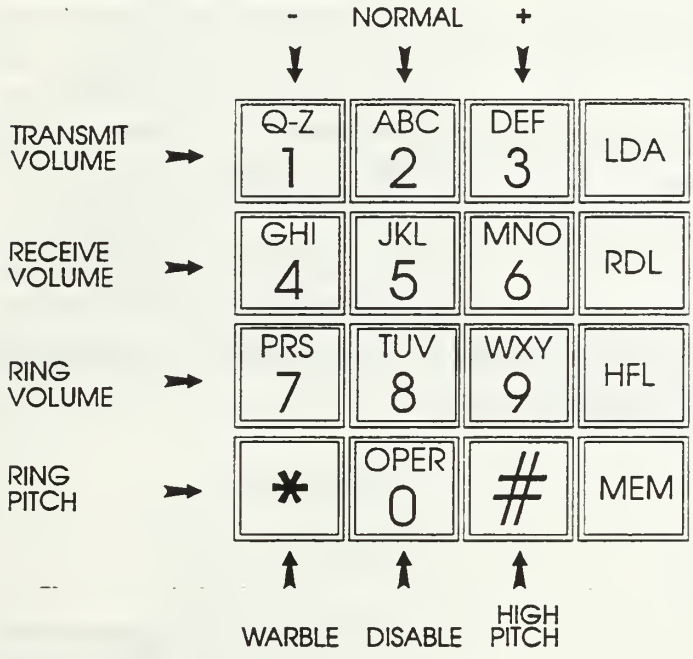


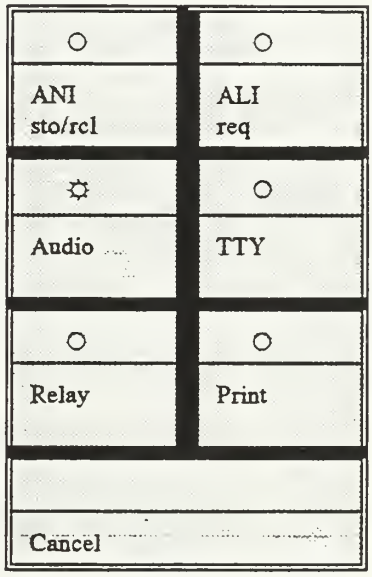
AUDIO ADJUSTMENTS

The APU is flexible in allowing the user to control the audio levels of the:

- Transmit volume
- Receive volume
- Ring volume
- Ring pitch

The Audio Function key is used to control this feature, followed by an entry made on the Dial Key pad.



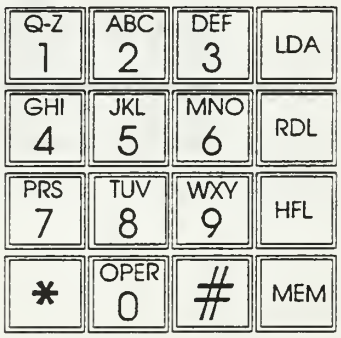


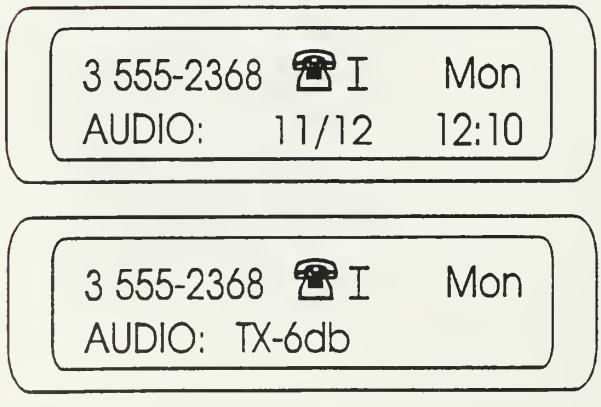
TRANSMIT AUDIO VOLUME

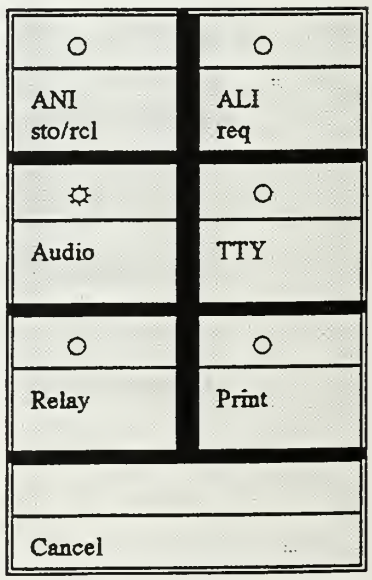
During a conversation on a 9-1-1 line, a telecommunicator can increase or decrease the Transmit audio volume. When the call is released or disconnected, the audio volume returns to normal. This function will be helpful to use when talking to a Hard of Hearing caller. Do the following:

ACTION	*RESULT*
1. Press the ***AUDIO*** Key.	1. The green ***AUDIO*** LED illuminates and Line 2 of the ANI screen displays: **AUDIO:**
2. To decrease the Transmit audio volume, press and release Dial Key 1.	2. The ANI screen displays: : **TX-6db** for approx. 2 seconds and the Transmit audio volume decreases by 6 decibels.
3. To increase the Transmit audio volume, press and release Dial Key 3.	3. The ANI screen displays: : **TX+6db** for approx. 2 seconds and the Transmit audio volume increases by 6 decibels.
4. To set Transmit audio volume to normal press and release Dial Key 2.	4. The ANI screen displays:: **TX NORM.**
To cancel the Audio function, press the ***CANCEL*** key.	5. The green ***AUDIO*** LED extinguishes and line 2 of the ANI screen displays operator ID, date and time.

To cancel the **AUDIO** function, press the ***CANCEL*** Key.





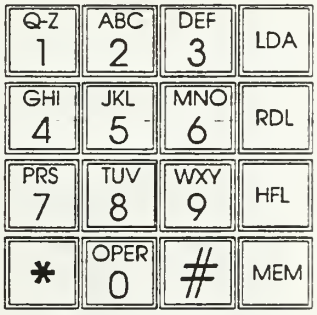


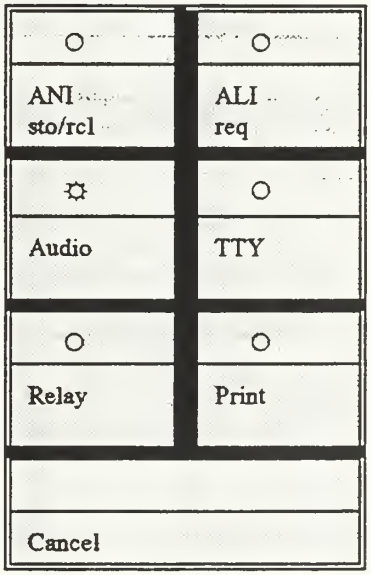
RECEIVE AUDIO VOLUME

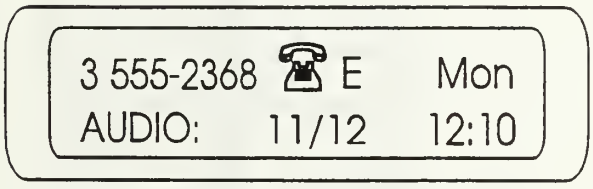
During a conversation on a 9-1-1 line, a telecommunicator can increase or decrease the Receive audio volume. When the call is released or disconnected, the audio volume returns to normal. This may be helpful when talking to a speech impaired caller. Do the following:

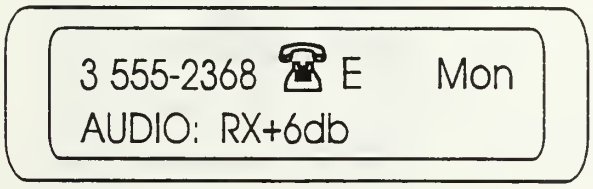
	ACTION		*RESULT*
1.	Press the ***AUDIO*** Key.	1.	The green ***AUDIO*** LED illuminates and Line 2 of the ANI screen displays: **AUDIO:**
2.	To decrease the Receive audio volume, press and release Dial Key 4.	2.	The ANI screen displays: : **RX-6db** for approx. 2 seconds and the Receive audio volume decreases by 6 decibels.
3.	To increase the Receive audio volume, press and release Dial Key 6.	3.	The ANI screen displays: : **RX+6db** for approx. 2 seconds and the Receive audio volume increases by 6 decibels.
4.	To set Receive audio volume to normal press and release Dial Key 5.	4.	The ANI screen displays:: **RX-NORM.**
	To cancel Audio function, press the ***CANCEL*** key.	5.	The green ***AUDIO*** LED extinguishes and line 2 of the ANI screen displays operator ID, date and time.

To cancel the **AUDIO** function, press the ***CANCEL*** Key.









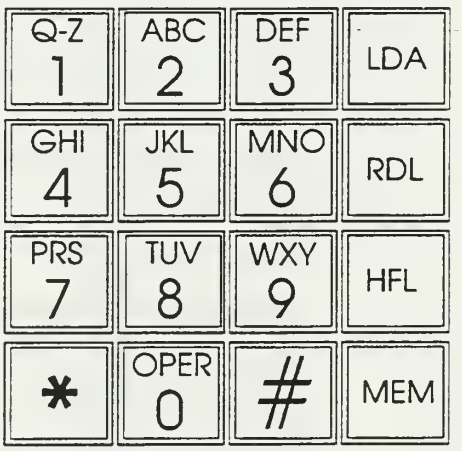
CHANGING THE RINGING VOLUME

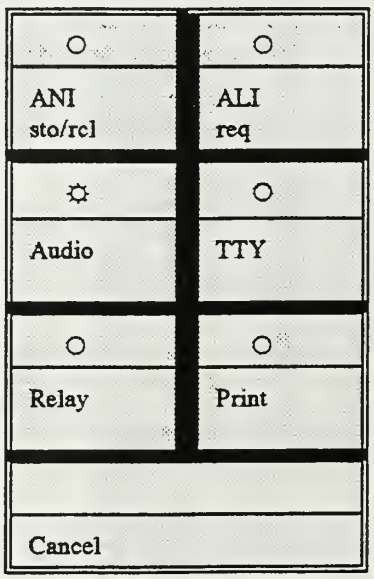
The ringing volume may be changed in any Mode. The eight levels of ring volume are selected by pressing the ***AUDIO*** key, followed by either the **7**, **8**, or **9** Dial Key.

NOTE: The Dial Key must be pressed within 20 seconds of pressing the ***AUDIO*** key, or the function times out.

ACTION	*RESULT*
1. Press the ***AUDIO*** Key.	1. The green ***AUDIO*** LED illuminates and line 2 of the ANI screen displays: **AUDIO:**
2. Press **8** to select a mid-range volume.	2. The ANI screen displays: **:RING 5/8** (Level 5 is the normal setting.)
3. Press the **7** to incrementally lower the volume level.	3. The ANI screen incrementally lowers down to **:RING 1/8**
4. Press Dial Key **9** to incrementally increase the volume level.	4. The ANI screen incrementally increases up to **:RING 8/8**
5. Select a desired level and press the ***CANCEL*** key to exit.	5. The green ***AUDIO*** LED extinguishes, and line 2 of the ANI screen reverts back to a normal display.

To cancel the **AUDIO** function, press the ***CANCEL*** Key.



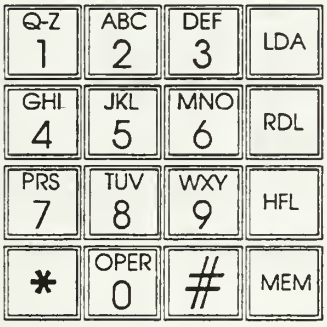


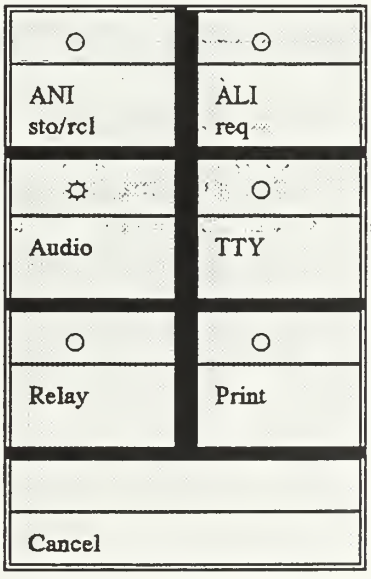
CHANGING THE RING PITCH

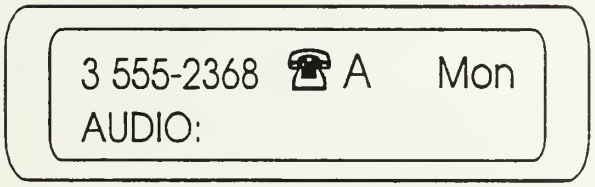
The APU allows a user to configure the ring pitch of 9-1-1 calls. The options allow for:

- A distinctive warble
- A high-pitched tone
- Completely disabling the ring

	ACTION		*RESULT*
1.	Press the ***AUDIO*** Key (from any Mode)	1.	The green ***AUDIO*** LED illuminates and line 2 of the ANI screen displays: **AUDIO:**
2.	Press * **(OR)**	2.	The ANI screen displays::**RING WARBLE** Incoming 9-1-1 calls will have a warble ring, to distinguish them from administrative calls.
3.	Press # **(OR)**	3.	The ANI screen displays::**RING HI PITCH** Incoming 9-1-1 calls will have a high-pitched ring, to distinguish them from administrative calls.
4.	Press **0** (Operator) **DO NOT DISABLE THE RING**	4.	The ANI screen displays: **:RING DISABLED** This disables the distinctive 9-1-1 ring.
5.	Press the ***AUDIO*** Key to exit; or To cancel the Audio function, press the ***CANCEL*** Key.	5.	The green ***AUDIO*** LED extinguishes and line 2 of the ANI screen displays the Operator ID, and the date and time.







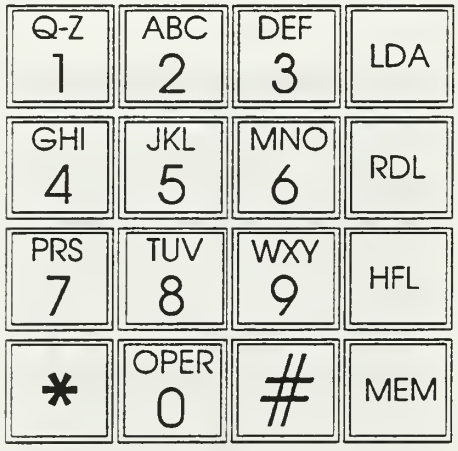
PLACING A MEMORY DIALED CALL

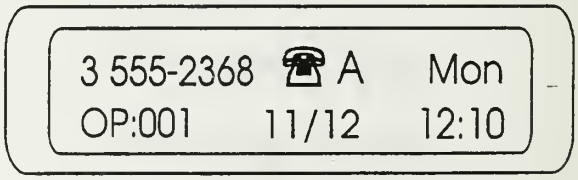
The APU can store as many as 100 telephone numbers in memory.

- The Memory numbers are from 00 to 99.
- A current list of memory numbers, including Memory Number, Name, and Full Telephone Number should be posted at the APU.

To access the numbers programmed in memory, do the following:

ACTION	*RESULT*
1. The APU must be in the Admin (**A**) mode.	1. The ANI Display shows the **A** mode, dial tone should be heard.
2. Using the Dial Pad on the APU, press and release the **MEM** key, followed by the 2-digit memory number (00-99) to be called.	2. The APU generates the tones for the number selected.





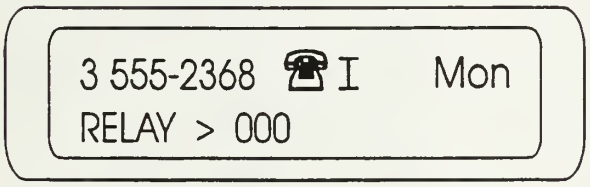
ACCESSING CONTROL RELAYS

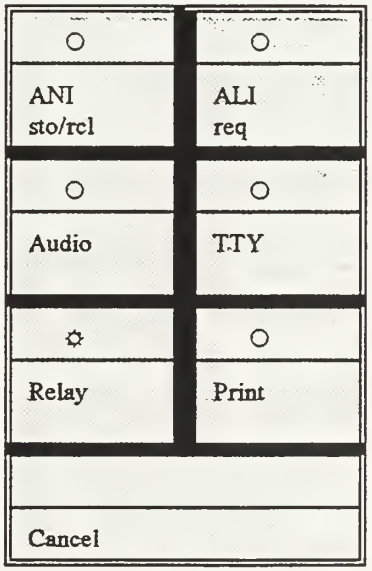
The RELAY key performs a special duty in the MAARS system. It controls the silencing of alarms, generated by the Control Cabinet, anywhere in the system.

When an audible alarm sounds, use the following procedure to silence the alarm.

ACTION	*RESULT*
1. (When an alarm is heard) Press the **RELAY** key.	1. The ANI Display shows: **RELAY>**
2. Using the Dial PAD key, press **0 0 0** (Zero three times).	2. The ANI Display shows **RELAY> 000.**
3. The alarm will be silenced. Notify the SRC when an alarm has been silenced.	

NOTE: If the selected relay does not exist in the system, the ANI Display will show the " **NO ACK** " error message.





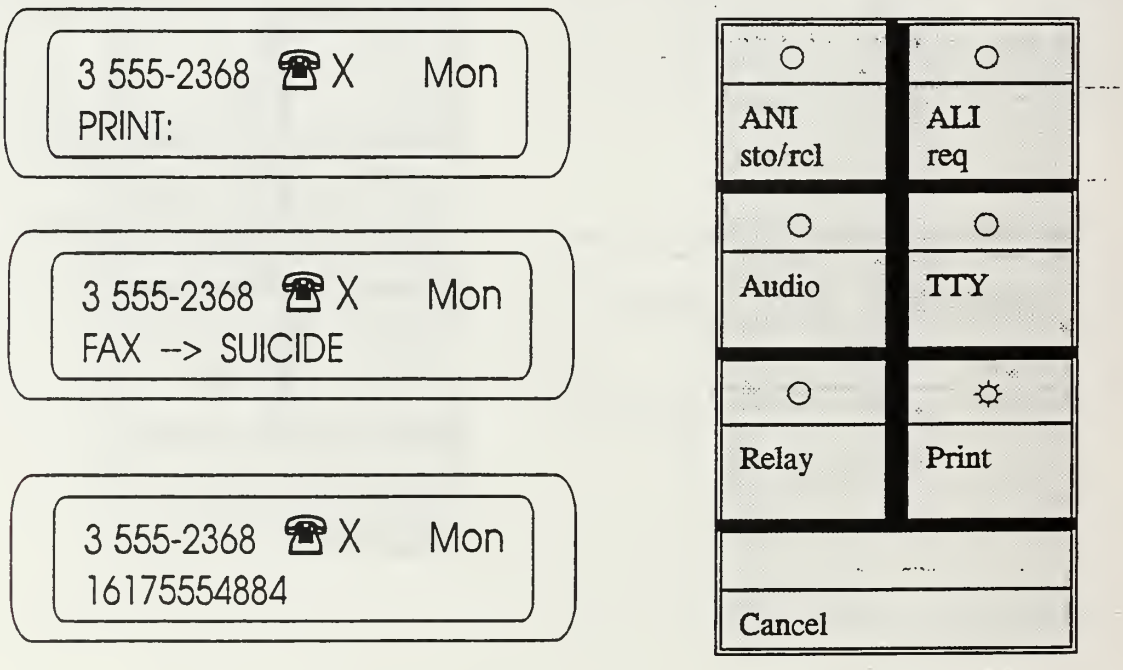
REMOTE PRINTING

Two methods are available to send a current ALI to a remote location. Method #1 requires the remote location be programmed to a Transfer Key on the APU. Do the following:

	ACTION		*RESULT*
1.	Press and release the ***PRINT*** Key.	1.	The green LED on the ***PRINT*** Key illuminates and the ANI screen displays: **PRINT:**
2.	Press the Transfer Key location where the ALI is to be printed.	2.	The Transfer Key location appears on the ANI screen. For example: **FAX -> SUICIDE** (approx. 2 sec.)
		3.	The green ***PRINT*** key LED extinguishes after the request.

Method #2 requires manually inputting the telephone number of the remote location. (A Transfer Key must be programmed with a "#" code and a designated "**MANUAL**" transfer.

	ACTION		*RESULT*
1.	Press and release the ***PRINT*** Key.	1.	The ***PRINT*** Key's green LED illuminates.
2.	Press the designated "Manual" Transfer Key.	2.	The ANI screen displays: **PRINT:**
3.	Enter up to 16 numbers on the APU Dial Key pad.	3.	The screen shows the entered digits.
4.	Press and release the ***MEM*** Key.	4.	The ***PRINT*** Key's LED extinguishes.



HANDS-ON EXERCISES

CONTENTS

EXERCISES

EXERCISE # 1 - VIEW THE ANI/ALI DISPLAY

- When an Incoming Call has been answered at the APU, the ANI and ALI Displays show a great deal of information.
- ANI - Automatic Number Identification
- ALI - Automatic Location Identification
- View the ANI and ALI Displays.

On the ANI Display, look for the following:

- Incoming telephone number, including Numbering Plan Digit (3 555-2368)
- APU status figure (off-hook)
- APU Mode (E)
- Day (Mon)
- Date and Time (11/12 and 12:10)

On the ALI Display, look for the following:

- Telephone class of service (RESD)
- Time and Date (12:10 and 11/12)
- Telephone number, including Area Code
- Name and Address (Wilkinson, Chris 646 Grayling Rd.)
- Municipality (Canton)
- Disability Indicator (TTY)
- ESN (Emergency Service Number) (571)
- Emergency departments and/or agencies assigned to the address (Canton PD, Canton FD, Canton Rescue)

EXERCISE # 2 - LOG ON / LOG OFF

- Log On with your assigned three-digit Operator I.D.
- Log Off
- Repeat several times until you are comfortable with Log On and Log Off.
- When ready, Log On and notify instructor.

EXERCISE # 3 - STORING ANI

- Store the ANI. Write down the tel # indicated. (first stored ANI)
- Store the ANI. Write down the number of the second stored ANI.
- Display the first stored ANI.
- Redial the first stored ANI.
- Release the line.
- Display the second stored ANI.
- Cancel the first stored ANI.
- Which number is still stored?

EXERCISE # 4 - PLACING AN OUTGOING CALL & USING THE HFL FUNCTION

(This is for use only on live PSAPs)

- Place an Outgoing Call using the following procedure.
- Suggested numbers to call, if applicable, are:
  - (617) 637-1234 (Time) or • (617) 936-1234 (Weather)
- Using the Outgoing 7-digit line, place a call.
- After making the connection, use the **HFL** key and dial another number.
- After the line starts ringing, press the **HFL** key again to conference both lines with the APU (3-way conference).
- If you reach a busy at this line, **HFL** again and that will disconnect you from that line. You are now clear to make another call.

EXERCISE # 5 - VISUAL AND AUDIBLE SIGNALS

PART I

- On Incoming calls, the APU provides visual and audible signals. The signals indicate on which line or trunk the Incoming call is ringing in.
- The audible signal will be either a warble or a high-pitched sound.
- Notice the LED's on the Line Pick-up Keys.
- Answer the call.
- One student will place the call on hold.
- Notice the LED's.
- Re-enter the same Line Pick-up Key.
- Disconnect the call by using the RELEASE key.

PART II

- Using your Job Aid, practice changing the Ringer Pitch between warble, high-pitched and disabled.
- Practice changing the Ringing Volume.

EXERCISE # 6 - TRANSFER A 9-1-1 CALL

- Answer the call.
- Transfer to Fire.
- Cancel the transfer. Notice all the messages that flash on the ANI display.
- Release the call.
- Answer call #2.
- Manually transfer to Poison Control. (617-555-5555)
- Release the call.

EXERCISE # 7 - SILENCE ALARMS

- Describe how you would silence an alarm.
- Who do you call immediately after silencing an alarm?
- Be prepared to demonstrate.

EXERCISE # 8 - SPEED DIAL

- Access an outside line.
- Speed dial a stored telephone number (e.g. #42).

EXERCISE # 9 - REDIAL

- Redial your last dialed telephone number.

EXERCISE #10 - REDIAL A STORED ANI

- Access the Outgoing 2 Way Emergency Line.
- Locate the desired stored ANI in the ANI sto/rcl list.
- Press the **RDL** key.

EXERCISE # 11 - TRANSFER/CONFERENCE

- Answer the call.
- Simulate a conference call.
- Be prepared to describe and demonstrate.

EXERCISE # 12 - REPORT TROUBLE WITH YOUR APU

- Access the Outgoing 2 Way Emergency Line
- Dial the Service Response Center number (1-800-E911-HELP)
- Describe problems with the APU.

EXERCISE #13 - ANSWERING A SILENT CALL

- Answer the call.
- Press the **TTY** function key **TWICE.**
- Simulate a conversation with the TTY caller by using
  * the pre-programmed TTY messages
  * the TTY keyboard.

EXERCISE #14 - TOGGLE BETWEEN A TTY TEXT AND ALI SCREEN

- Make sure you are in the TTY mode.
- To verify the ALI information, press the **TTY** function key **ONCE** and the **ALI req** function key **ONCE.**
- To toggle back to the TTY text screen, press the **TTY** function key **ONCE** and the **ALI req** function key **ONCE.**

EXERCISE #15 - INCREASE/DECREASE THE TRANSMIT VOLUME

- Answer the call.
- Increase the Transmit volume.
- Return the Transmit volume to normal.
- Decrease the Transmit volume.
- What happens when you release the line?

EXERCISE #16 - INCREASE/DECREASE THE RECEIVE VOLUME

- Answer the call.
- Increase the Receive volume.
- Return the Receive volume to normal.
- Decrease the Receive volume.
- What happens when you release the line?

EXERCISE #17 - INCREASE/DECREASE THE RING VOLUME

- Increase/decrease the ring volume.

EXERCISE #18 - CHANGING THE RING PITCH AND WARBLE

- Change the ring pitch to a warble or the warble to a ring pitch.

EXERCISE #19 - IDENTIFYING THE CLASS OF TELEPHONE SERVICE

- Demonstrate how to identify the class of telephone service of the caller.

EXERCISE #20 - ALI DISCREPANCY FORMS

- Demonstrate how to fill out an ALI Discrepancy form.

EXERCISE #21 - TRANSFER A 9-1-1 CALLER TO THE RECORDING

- Demonstrate how to transfer a 9-1-1 caller to the recording.

EXERCISE #22 - TRANSFER A TTY CALLER TO THE RECORDING

- Remember that TTY callers **CAN NOT** be transferred to the recording.
- Demonstrate how to handle a non-emergency call from a TTY caller.

EXERCISE #23 - CALLING ANOTHER PSAP

- Access the Outgoing 2 Way Emergency Line.
- Dial the "Inter-PSAP" number of the desired PSAP.

TTY-CALL HANDLING PROCEDURES

CONTENTS

ASL CONVERSATION ABOUT AN EMERGENCY SITUATION

Florida 911 chief blames old equip...

By Jim Haner

Advocates for the deaf and the Broward Sheriff's Office in Miami, Fla. met Oct. 9 to unravel a recent string ... complaints from deaf resid... say the county's 911 sy... tem has failed the... Nancy Wa... United...

house in Fort L... "Like ... In b...

DECEMBER 1992 / 9

SILENT NEWS

Problems with 911 continue to plague deaf community

...aged by county para... ambulance driver... against the ove... field nea... the...

...mplaints are similar to ...

...poor ...ponse at all ...in the county dis...

...will have both those things in a few months. Until then, we have to do the be... ...can with what...

...better and more ...he said. "We

...staff

Linda Gardiner describes pro...

...d he only ...e of the ...Linda ...ngtime advocate for ...vices to the deaf, ...ice have been de... ...g to her house ...the dispatch

...heart attack, ...said. "I ...try to call ...get any

...police ...deliv... ...dawn of her

Davie home. After three trie... a dispatcher. Po... hour later — excelle... standards for a non-... About a week later, she thought she saw ... through her mailbox and ... but no one answered. She had to call a telephone sol... get an operator to ... directly. Police...

Silent News, June 1993

Family sues over 911-related death

By Jill Jorden Spitz

TAVARES, Fla. — Because he was hearing impaired, Robert A. Malone counted on technology to connect him with the hearing world.

But according to a lawsuit filed April 16 in circuit court in Lake County, the

Although none would discuss th... Tavares City Admi... said an outside in... mined the city wa... Malone's death.

Southwest Florida... tal Risk Managem...

In Alabama, delay in fire response endangers deaf woman's life

A 911 operator hung up on a deaf woman trying to report a fire in Talladega. After a frightening delay, she finally got help after dialing an 800-number in Birmingham.

Kayleen Pugh's troubling experience resulted in a review of procedures for the 911 dispatcher, according to administrator Larry Wright.

Talladega is home to the Alabama Institute for the Deaf and Blind, where Pugh is a teacher.

She had discovered a fire in her bathroom exhaust fan. She called 911. The dispatcher who answered heard no voice in the line, so she hung up. Pugh got hung up on again. ...on me that a problem ...dega. I thought Tal... ...more educated with ...with disabilities," said ...resident of the Ala... ...n of the Deaf. ...800 number to get the ...enter in Birmingham. ...e to send a message

...en called 911, and a ...fire truck. ...lay not only endan... ...but also violated the ...isabilities Act which ...cess for the handi...

...nt, Pugh contacted ...ant and learned that ...r had a TTY, but it ...d because of prank

...trator for Talladega ...en with prank calls the dispatcher should connect the phone to the TTY to find out if it could be a deaf person calling.

— Mobile (AL) Press October 27, 1992

After series of operator hang-ups, Indiana deaf ask 'Can we rely on 911?'

By Erica Franklin

Increasing complaints that the 911 emergency system ignores the Indianapolis deaf community has prompted some advocates for the deaf to call for changes in how 911 operators respond to calls for help.

Community Services for the Deaf and the Indiana Assoc. for the Deaf have received at least five complaints each in recent months that 911 operators hang up on hearing-impaired callers. What upsets the advocates is the potential result: a delay of emergency medical help.

"The point is equal access to 911 for the deaf," said Nita Kinnear, acting director of Community Services for the Deaf.

At issue is the difference between the way deaf callers and 911 operators communicate via a special machine f... the hearing-impaired.

That difference has left some d... callers waiting for the operator... respond to their call while on the... end, the operators wait for a tone... ing them that they have a deaf...

The Indianapolis Police Depa... which takes most of the city's 9... and advocates for the deaf sa...

Silent News, June 1993

Another death blamed on slow response to 911 TTY call

By Melanie Busch

TULSA, Okla. — When Betty Worth's husband collapsed on their living room floor in late March, her call for help could not be heard.

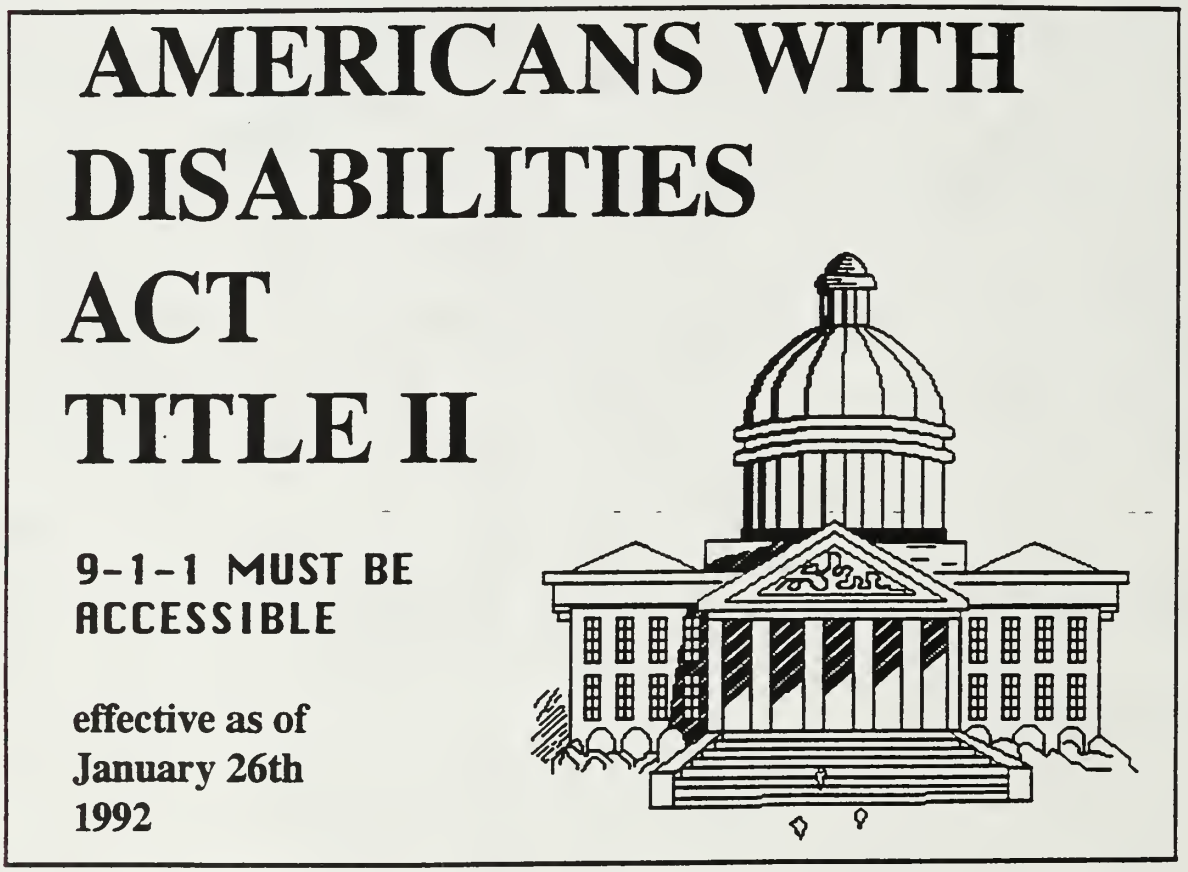
Worth is deaf.

AMERICANS WITH DISABILITIES ACT (ADA)

In 1990, Congress passed into law what is commonly referred to as the Civil Rights Law for the Individuals with Disabilities known as the Americans with Disabilities Act, ADA. This law is divided into 5 sections, or titles: 1) Employment, 2) Public Services, 3) Public Accommodations and Services Operated by Private Entities, 4) Telecommunications, and 5) Miscellaneous Provisions.

Title II, Public Services, applies to "Public Entities" which are defined as "state and local government and any department, agency, special purpose district, or other instrumentality of a state or a state's local government."

This title became effective on January 26, 1992.



Title II, Public Services, Section 202, has particular relevance to emergency services, It stipulates, "No qualified individual with a disability shall, by reason of such disability, be excluded from participation in or be denied the benefits of the services, programs, or activities of a public entity, or be subjected to discrimination by any such entity." In other words, TTY-users must have equal access to emergency services by dialing 9-1-1.

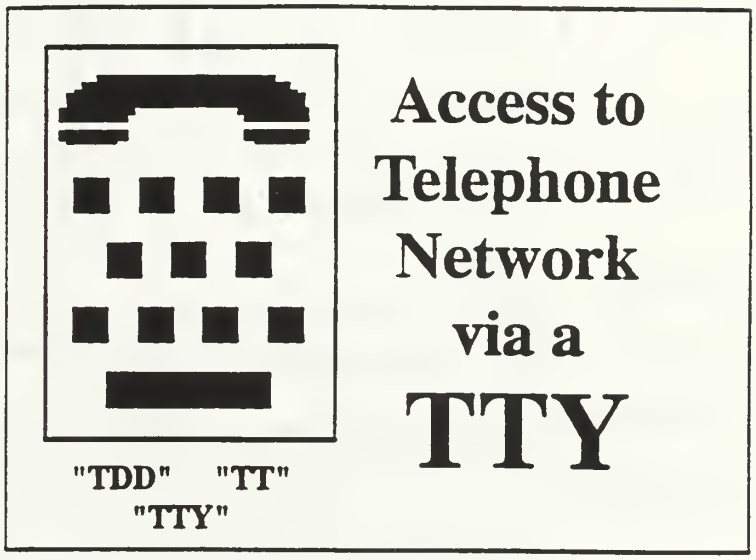
WHAT IS A TTY?

The device used by individuals who access the telephone network by either a computer or telecommunications machine is called a TTY, which stands for teletypewriter. Although there are a number of additional references to this type of machine, such as "Telecommunications Device for the Deaf (TDD)" and "Text Telephone (TT)," the term TTY is preferred here in Massachusetts.

The term "TDD" stands for "Telecommunication Device for the Deaf;" however, individuals who are not deaf regularly use this equipment to make a phone call.

In Massachusetts, the preferred term for this device is TTY.

TTY's are not compatible with "voice" calls, therefore, both callers must have such devices.



MASSACHUSETTS RELAY CENTER

In the event that a hearing person wants to call an individual who communicates by phone with a TTY or if a TTY user wants to call a person who does not have such a device, either party can make that call through the Massachusetts Relay Center. The Relay Operator will act as a communication intermediary for the parties of the conversation: voice what is typed, and type what is heard. Additional service features include HCO (Hearing Carry Over) and VCO (Voice Carry Over) for callers who prefer to use either their remaining hearing or voice capacities.

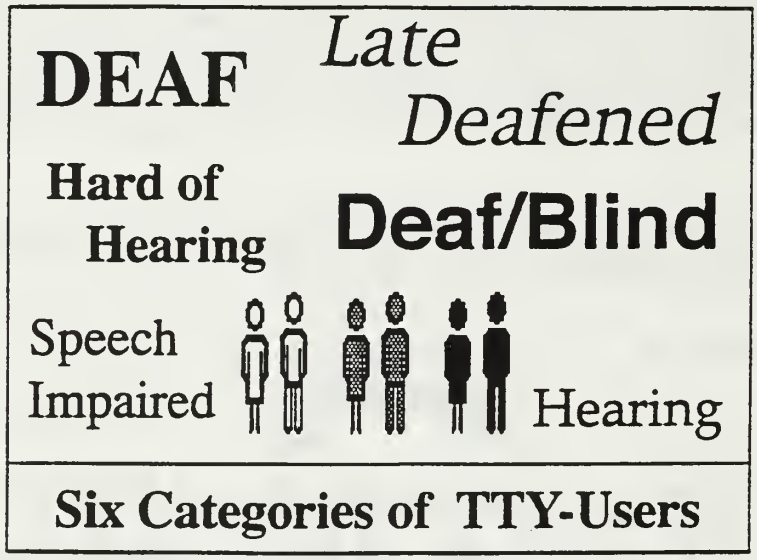
This service is available 24-hours per day for citizens of Massachusetts and is accessed by a toll-free number: 1-800-439-2370 (Voice/TTY).

NYNEX CENTER FOR INDIVIDUALS WITH DISABILITIES

NYNEX provides equipment for qualified individuals with disabilities living in the Commonwealth. Special equipment includes TTY's, braille TTY's, visual and loud-ringer signalers, along with amplification devices, to name a few.

For more information, application, or tour, contact a service representative at 1-800-974-6006 (Voice/TTY).

SIX CATEGORIES OF TTY-USERS



There are six identified categories of TTY-Users:

- Deaf
- Hard of Hearing
- Late Deafened
- Deaf/Blind
- Speech Impaired
- Hearing

Deaf TTY-Users are individuals who were born deaf or lost their hearing prior to learning spoken English and primarily communicate over the telephone network by a TTY.

Hard of Hearing TTY-Users are individuals who have some degree of hearing loss and may communicate over the telephone network by a TTY or use amplification equipment with a telephone.

Late Deafened TTY-Users are individuals who were born without hearing loss, but due to trauma or illness, are now deaf and primarily communicate over the telephone network by a TTY.

Deaf/Blind TTY-Users are individuals who are both deaf and blind. An individual may have been born deaf and blind. Or born deaf, then later lost their vision. Or born blind, then later lost their hearing. Or became deaf and blind later in life due to trauma, illness, or age.

The TTY used by these individuals can be of two styles:

- TTY with a large visual display
- Braille TTY - hard copy or tactile.

Speech impaired TTY-Users are hearing individuals who do not have use of their voice.

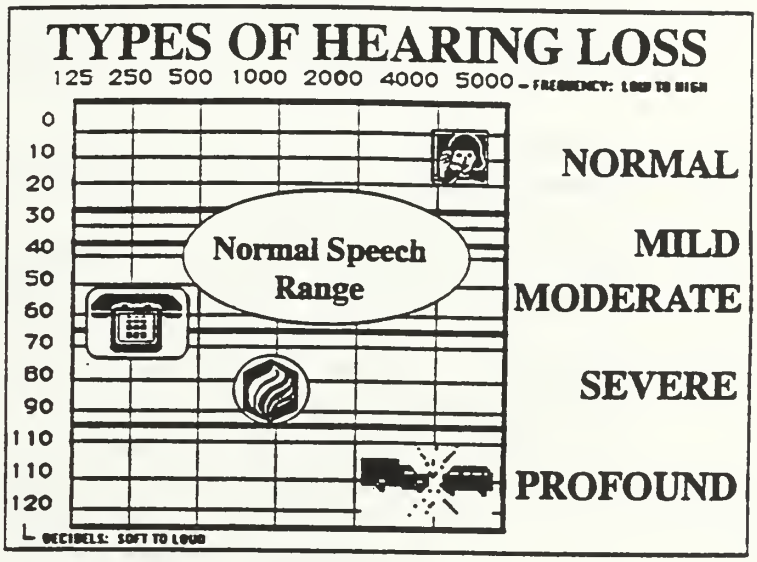
Hearing TTY-Users are hearing individuals who may be a spouse, child, sibling, friend, or relative of a TTY-User and in a home where all the phones are only TTY. Many TTY units have direct connect capability and thus eliminate the need for an actual telephone set.

TYPES OF HEARING LOSS

When a person has a hearing test, his/her hearing thresholds are recorded on a diagram known as an audiogram. A person is considered to have normal hearing if both ears test above the 25 decibel level. If a person's hearing tested at 60 decibels, he/she cannot hear speech without amplification. Because the telephone acts as a filter for many sounds and many sounds are not transmitted, an individual may have more difficulty communicating over the telephone by voice than in a face-to-face situation.

The numbers (0-120) represent decibel levels from soft to loud. The numbers (125 to 5000) represent frequency levels from low to high.

- NORMAL = ability to hear all decibel levels
- MILD = ability to hear sounds greater than 35 dB.
- MODERATE = ability to hear sounds greater than 45 dB.
- SEVERE = ability to hear sounds greater than 65 dB.
- PROFOUND = ability to hear sounds greater than 95 dBs.



SOUND AND DECIBEL LEVELS

Deaf and hard of hearing people may be unaware that certain environmental sounds exist, such as an explosion, accident, or footsteps.

- The normal speaking range of the human voice is approximately 40 decibels.
- A telephone rings at approximately 60 decibels.
- An alarm may sound at approximately 90 decibels.
- An accident may produce a sound of approximately 110 decibels.

Depending on the level of hearing, individuals may or may not be able to detect certain sounds. Hearing aids do not reproduce "natural" environmental or speech sounds. Hearing aids do not restore a person's hearing loss back to normal.

Remember when talking with a hard of hearing caller, you need to be much more patient in order to communicate effectively.

HEARING AIDS: THE MYTHS AND REALITY

There are a number of myths about the effectiveness of hearing aids:

MYTH: Hearing Aids correct hearing like glasses correct vision.

REALITY: Because hearing aids cannot be perfectly calibrated to match a person's hearing loss, they do not correct that loss.

Glasses can correct a person's vision to "20/20";however, a hearing aid can only amplify sounds.

AMPLIFICATION

- ☑ **Hearing aids cannot be perfectly calibrated to match a person's hearing**
- ☑ **Just because a person wears a hearing aid does not mean that he/she can understand speech**
- ☑ **Some people choose not to wear hearing aids because sounds "spike" in londness for them or because it magnifies "ringing" in their ears**
- ☑ **Hearing aids are mechanical devices and, thus, produce mechanical sounds**
- ☑ **Hearing aids do not make a person have normal hearing**

MYTH: When a person uses a hearing aid, he/she can hear speech.

REALITY: Hearing aids are mechanical devices and, thus produce mechanical sounds. Both speech and environmental sounds are made louder. If a person has a loss of hearing in the typical speech range, hearing aids cannot aid in the understanding of speech.

MYTH: Deaf and hard of hearing people wear hearing aids.

REALITY: The decision to wear a hearing aid is a very individual one. Some people choose not to wear hearing aids because sounds "spike" in loudness for them or because it magnifies "ringing" in their ears.

MYTH: When a person can talk, he/she can hear everything you say.

REALITY: A person's ability to speak clearly is not an automatic indication that they can understand everything you say.

Hearing aids do not make a person have normal hearing or always help them to understand speech.

AMERICAN SIGN LANGUAGE (ASL)

American Sign Language (ASL) is formally recognized as a unique and visual independent language. As with any other language, ASL has rules for sentence structure, time references, and use of grammar. In fact, ASL uses what is known as "visual grammar." Visual grammar is very different from English grammar because it is based on how we see the world, not on how the world sounds. When we see the world, we first see the entire picture or scene, then focus on the smaller and specific details.

ASL generally requires the use of the time reference at the beginning of a sentence or statement. This is because it determines the verb tense and actions following. Also, when words are emphasized or pluralized, they are often repeated.

Some TTY-users who are fluent in American Sign Language may have difficulty in reporting an emergency because ASL does not have a written form. Also, these individuals are second-language users of English so sometimes the rules of the two languages, ASL and English, get mixed up and spelling may not be very accurate. ASL is only a visual language, not a written one. So in order to communicate via the TTY, users of ASL must "borrow" written English words to express ideas, thoughts and comments.

Some TTY-users are fluent in written English. In order for the telecommunicator to be most effective during a 9-1-1 call, he/she must be able to communicate with any TTY-caller, regardless of their use of written English. Avoid the use of idioms, complex sentence structures, punctuation, and un-common vocabulary. In responding to a request for help, you should be as simple and direct as possible to reduce any possible miscommunication due to language translation problems.

LANGUAGE TRANSLATIONS

Sometimes phrases in one language can be easily translated into another language. Such as the Spanish words, "departament de la policia", can be easily translated to the English words "police department." But, because languages are different from one another, there are often not exact equivalent translations between one word, phrase, or concept in one language into another language.

Language Translations

SPANISH	ASL	ENGLISH
¡ME ESTAN ROBANDO EL AUTO DE MI CASA! ¡AYUDA!		THEY ARE STEALING MY CAR FROM MY HOUSE RIGHT NOW. HELP!
Me are stealing of the auto of my house. Help!	Help Help Now house my car park front people grab that steal help	

When any language is translated into English, in this case written English, but the writer keeps the original language grammar, the "English" sentence will not follow proper English grammar. This results in what appears to be a very poor English sentence when it is only the English-second-language users' attempt to make an unpolished language translation.

SILENT CALLS

For Silent Calls, access the TTY mode by pressing the TTY Function Key twice.

When you hear the tweedle tones, the APU will automatically place the unit into TTY mode. DO NOT TOUCH THE TTY FUNCTION KEY!

An overwhelming majority of TTY-users do not tap any key on their keyboard to indicate to the person answering the phone that the call coming in is, in fact, a TTY call. A few telecommunication devices are pre-programmed with a synthesized voice that will announce the call as a TTY call.

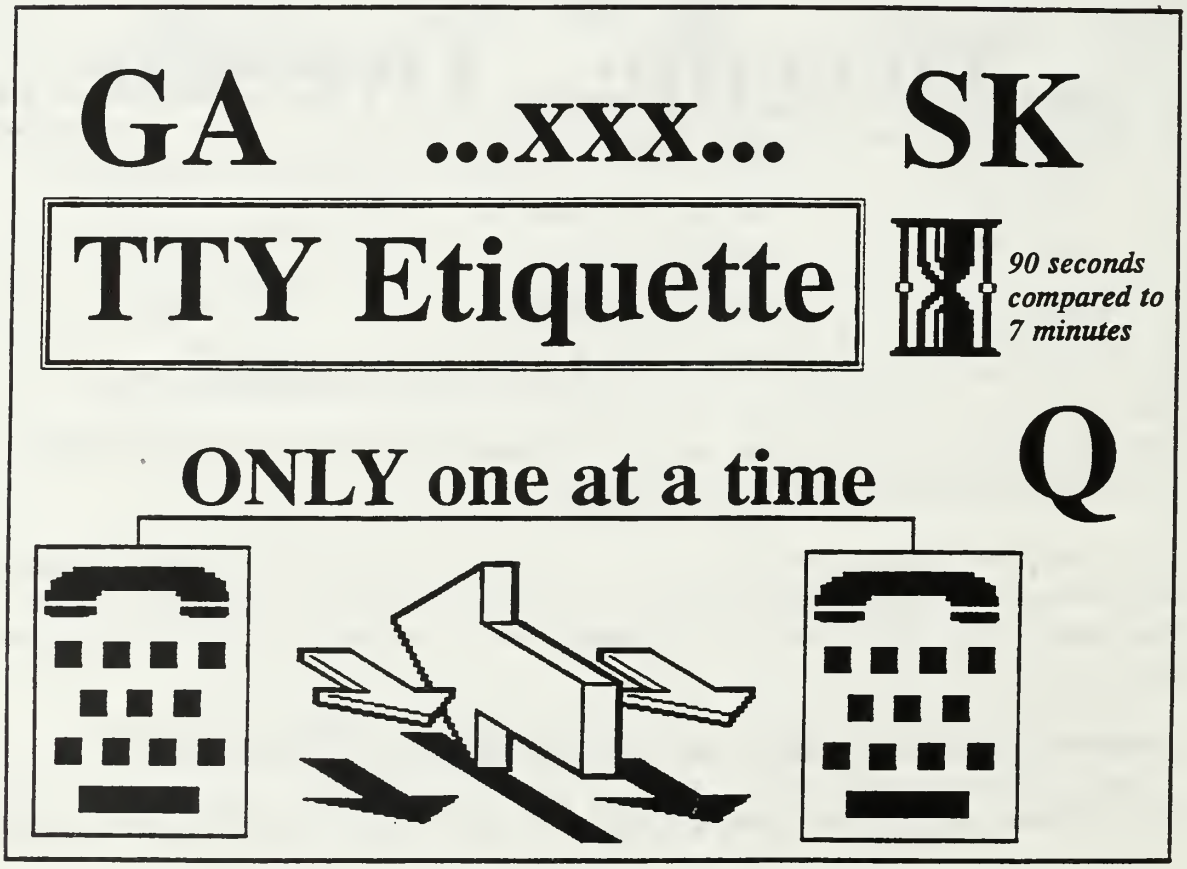
Every silent call must first be processed as a TTY call before being released.

For additional information on handling silent calls, refer to local call-handling procedures.

TTY ETIQUETTE

There are several conversational rules of etiquette that will make communicating via the TTY easier:

- Don't panic. Handle TTY calls into 9-1-1 as you would professionally handle other calls.
- These calls will take longer to complete. One study found that average voice calls were handled within 90 seconds; whereas the average TTY call took 7 minutes to complete.
- Keep your conversation direct and simple.
- You can not interrupt. Only one person can type at a time.
- Always verify critical information such as a telephone number and address.
- Use the code "GA" that means "go ahead" to indicate it is time for the caller to type.



TTY ETIQUETTE (Cont'd)

- Do not use punctuation.
- Avoid use of English idioms, complex sentence structures, and un-common vocabulary: location = place, rescue = help, dispatch = send, etc.
  - Don't use idioms such as: "hold your horses", "don't rock the boat"
- Use the letter "Q" at the end of a question instead of typing a question mark (?).
- Ask only one question at a time. Either use a TTY pre-programmed message or use the TTY keyboard. You can type the beginning part of a message and end with a pre-programmed message.
- Remember that if you ask a question that will require the caller to leave the telephone to get the information, you must wait until the caller returns.
- Use the letters "XXX" to correct misspellings, mistakes or changes of thought.
- Use the code "SK" that means "stop keying" to indicate you are finished with the call and are ready to release the call. **The caller must respond with "SK" before you can hang up.**
- To toggle between the TTY screen and the ALI screen, **first** press the TTY key once **then** the ALI req key once. After verifying the address and to return to the TTY screen, **first** press the TTY key once **then** the ALI req key once.
- Follow these guidelines when transferring a TTY call:
  (You must know if the agency you will transfer the call to has a TTY. If not, then you will need to relay the information between the caller and the agency.)

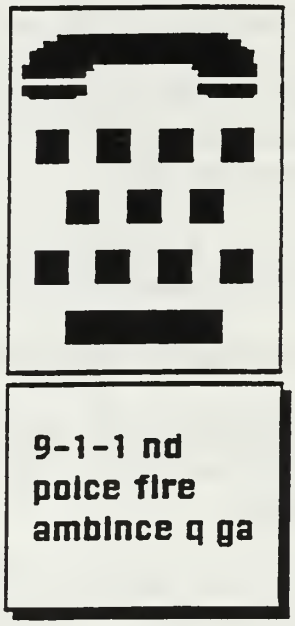
  1. Receive a silent call, press the TTY key twice to enter the TTY mode.
  2. Find out the nature of the emergency and which agency should respond.
  3. Type "PLS HOLD" or use "MEM*6"
  4. Press the TTY key twice to exit the TTY mode.
  5. Transfer the call by any of the following - single button transfer
     - manual transfer
     - speed dial transfer

- ANI Redial with a TTY: Access the Outgoing 2 Way Emergency line, find the number from the ANI sto/rcl list, press the TTY key twice to enter the TTY mode, press the RDL (redial) key.
- **DO NOT USE THE 3-WAY CONFERENCING (ADD ON/HOOKFLASH) FEATURE WITH TTY CALLERS.**
- Do not leave the TTY caller on HOLD for a long time. The caller has no way to know if the call is still on hold or has been disconnected.

COMMON TTY ABBREVIATIONS

COMMON TTY ABBREVIATIONS

ASAP...as soon as possible
HD...hold
INFO...information
MSG...message
NBR...number
OK...Okay or alright
PLS...please
THOT...thought
U...you
UR...your
XXX...mistake, misspelling, change of thought



CUD...could
FONE...phone
MIN...minute
NXT...next
TMW...tomorrow
IMPT...important
HOSP...hospital
OPR...operator
WUD...would
SHUD...should
BLDG...building
PBLM...problem
DR...doctor
THX...thanks

ga	go ahead
q	question
sk	stop keying
u	you
ur	your

Although these abbreviations are commonly known and understood, if a caller does not seem to recognize any of the above, take the time to spell the entire word.

DO NOT MAKE UP YOUR OWN ABBREVIATIONS.

REVIEW

DIRECTIONS: Fill in the blanks.

1. At the end of a TTY conversation, the caller must respond with the Code _ _ before the PSAP can release the call.

2. Individuals who are both deaf and blind and communicate over the telephone network by a TTY are known as _ _ _ _/ _ _ _ _ _ TTY-Users.

3. TTY calls will take _ _ _ _ _ _ to complete.

4. The TTY code "GA" stands for _ _ _ _ _ _ _ which indicates turn-taking.

5. Instead of typing a question mark at the end of a TTY sentence, use the letter "__" to indicate that a question is being asked.

6. The title of the American With Disabilities Act that defines state and local government responsibilities releveant to accessibility by individuals with disabilities is Title _ _ _.

7. Amerigan Sign Language is a _ _ _ _ _ _ language - independent and unique.

8. Hearing Aids _ _ _ _ _ _ correct hearing like glasses correct vision.

9. To enter the TTY mode, press the TTY function key, _ _ _ _ _ .

10. To toggle between the TTY screen and the ALI screen, press the _ _ _ key _ _ _ _ and the _ _ _/_ _ _ key _ _ _ _.

11. True or False: The Single Button Transfer key number 9 "Recording" can be used with a TTY caller.

CALL HANDLING PROCEDURES

CONTENTS

OVERVIEW

The most available and important means a citizen has of obtaining access to Public Safety services

The telephone is the most available, and therefore, the most important means of access the citizen has of obtaining Public Safety Services. It is also the fundamental method of communication within and between Public Safety Answering Points (PSAPs) and the chief means of informational messages. Whenever a telecommunicator answers a call, they are about to meet someone, to engage in a conversation as important as a face-to-face visit. They represent the entire public safety profession.

Therefore, it is important to establish acceptable call answering techniques for all PSAPs within our statewide Enhanced 9-1-1 system.

But we also realize we can in no way cover every situation with a set course of action as every call for assistance is unique and may require special handling. Our purpose is to give you basic guidelines which should be used with common sense, professionalism, and courtesy to ensure an appropriate response to each individual request for assistance. You should bear in mind that while receiving 9-1-1 calls for help, you will be dealing with people stressful situations. Their reactions to this emergency will result in varied responses ranging from calm to frantic, with no idea of where they are or what the problem is.

OVERVIEW (Cont'd)

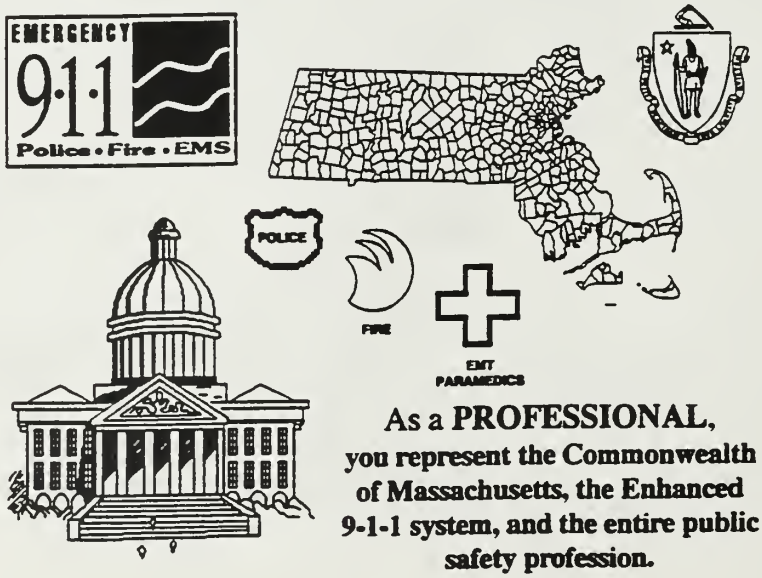
Point of Contact

Effective, Efficient, and Professional

It will be up to you to elicit the proper information as quickly as possible so as to ensure the appropriate and proper agencies respond to their emergency. Your attitude, concern, and level of professionalism will reflect upon the entire Commonwealth of Massachusetts and the statewide Enhanced 9-1-1 system. You will be setting the scene for the response: smooth and professional, or otherwise.

As a telecommunicator within your PSAP, you are the vital link between field operations and the appropriate receiving agency. The safety and well-being of all field personnel, patients and/or personal property is in your hands.

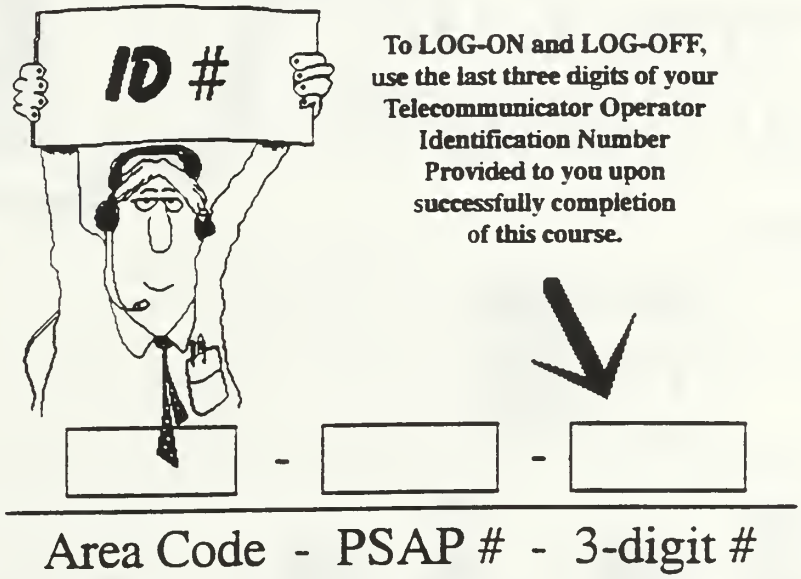
The proper procedures and protocols for answering 9-1-1 calls from the general public and other public service agencies are essential to the overall success of the E-9-1-1 project. The recommended verbal interaction and thought procedures to be used by PSAP Telecommunications will be covered in this lesson.



As a **PROFESSIONAL,**
you represent the Commonwealth of Massachusetts, the Enhanced 9-1-1 system, and the entire public safety profession.

LOG-ON PROCESS

Each telecommunicator approved to answer 9-1-1 calls using the Enhanced 9-1-1 PSAP equipment will be given an operator identification number. This number must be used according to the log-on/log-off procedures at the beginning and end of each shift.



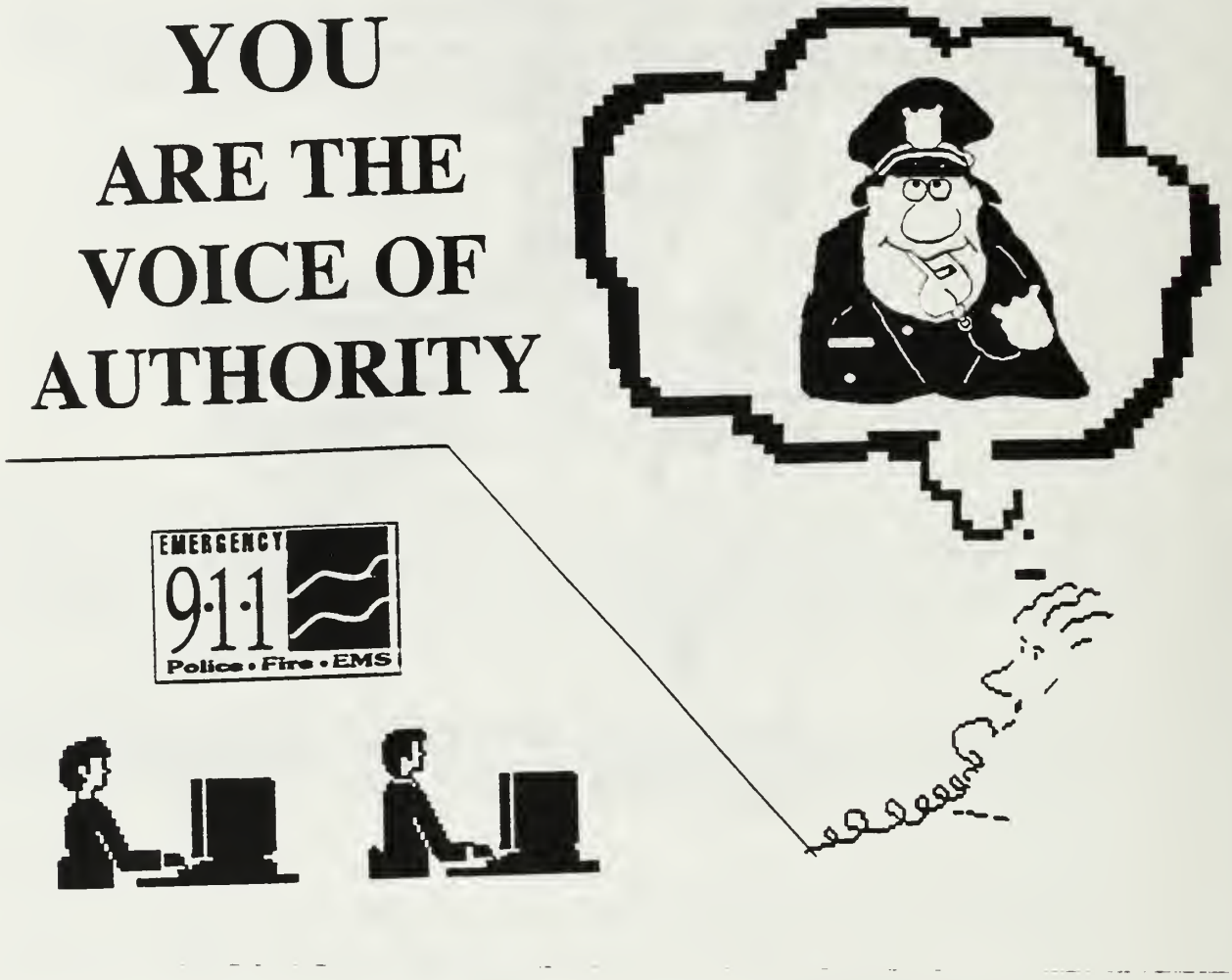
VOICE OF AUTHORITY

Each telecommunicator will deal directly with the general public and various emergency service agencies using the telephone as our primary link. The average citizen will call a public safety agency at least once during their lifetime. The telecommunicator should endeavor to make such encounters with a citizen a positive event.

The citizens who use our services will attach importance to the words spoken. They will view the telecommunicator as the "Voice of Authority". As such, it is foremost the telecommunicator understand the significance of "What You Say" and "How You Say It".

Since the telecommunicator is viewed as the "Voice of Authority", they effectively become the agency. "What You Say" will carry a great importance to those you are speaking with. And "How You Say It," pleasurable and with conviction or discontent and with ambiguity, will unquestionably have an effect upon the outcome of your call.

VOICE OF AUTHORITY (Cont'd)



"What You Say" is so important because the citizen or caller is not usually familiar with the rules and responsibilities of the emergency service agencies and callers are often in panic or crisis situations. They will not always hear everything you say or may not always interpret what you say as you mean to say it.

You should make sure to think before you speak, bear in mind, that what you say will be remembered, and make sure it is clear to the calling party who will be handling their incident.

"How You Say It" is another area which must be clear. Listen to yourself. The tone and fluctuation of your voice can sometimes say much more than the words.

You should make sure to mean what you say, offer clear instructions to the caller, support callers with status reports (if applicable) and make sure that the caller understands your instructions and/or advice.

PROMPT ANSWERING

The citizens of your community expect emergency calls to 9-1-1 centers will be answered promptly. This is not an unreasonable expectation. But as professional telecommunicators, we know all telephone calls should be answered promptly.

To ensure prompt answering, a telecommunicator should utilize the following guidelines:

- 9-1-1 lines must always be answered first.
- Be prepared to handle an emergency on any line. Not all emergency calls will come in on 9-1-1 trunks.
- If the PSAP is extremely busy, and other calls are being received, place the call "on-hold" in order to answer the incoming 9-1-1 calls.
- The proper technique to place a call "on hold" is to:
    - Always preface putting someone "on hold" with a brief statement
    - In a few words explain you are putting them on hold. Remember your voice tone and fluctuation says as much as your voice.
    - Be sensitive to placing the caller "on hold". How would you feel if the roles were reversed?
    - Get back to the original call as soon as possible.
    - Under extremely busy conditions you may need to repeat this process more than once.
    - Failure to advise a caller that you going to place them "on hold" will usually result in another incoming call. Only this time the person will usually be a trifle irate as they now explain you hung up on them a minute ago.

You should always remember in many cases the caller will miscalculate the actual time it takes for their emergency call to be answered and agency to respond to their emergency. Prompt answering of 9-1-1 calls is an effective safeguard against citizen complaints.

STANDARDS

9-1-1 lines must always be answered first.

Be prepared to handle an emergency on any line.

PSAP Telecommunicators must answer within ten (10) seconds of the receipt of the call.

Always preface putting someone "on hold" with a brief statement.

Get back to the original call as soon as possible.

ALI VERIFICATION

The data provided by the Automatic Location Identification (ALI) feature will assist the PSAP Telecommunicator in answering questions about the call. The PSAP Telecommunicator should:

- Use the ALI to support any information provided by the caller.
- Confirm the location (Where) of the incident.

```
RESD 12:10 11/12
(413) 555-2368
WILKINSON, CHRIS
      646
GRAYLING RD

CANTON
DHH
ESN=571

CANTON POLICE
CANTON FIRE
CANTON RESCUE
```

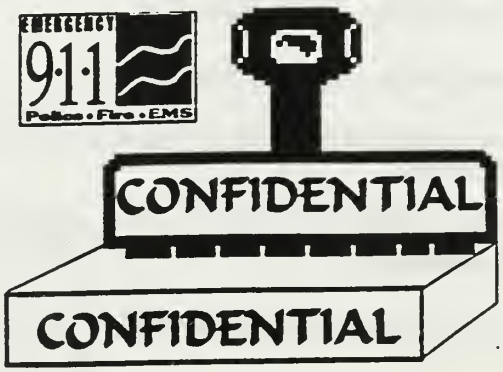
It should be rememberd that in many cases an incident may be occuring at a location different from what is displayed on the ALI screen.

The telecommunicator should always verify the location of the incident. If the caller is calling from the incident location and that information is different that what appears on the ALI screen, the telecommunicator must follow procedures for reporting ALI discrepancies.

CONFIDENTIALITY

All of the information found on the ANI/ALI screens is confidential. Therefore, the telecommunicator must honor the privilege of this information by never communicating any details to a caller.

In other words, **NEVER** pass along ant ANI/ALI information to a caller.



INCOMING CALL PROCEDURES

The Statewide Emergency Telecommunications Board has put together one of the best Enhanced 9-1-1 systems in the country. Within the scope of this system, uniformity is required among PSAPs.

The following guidelines shall be used as incoming call procedures:

ANSWERING INCOMING CALLS

9-1-1

This line is being recorded

What is your emergency?

- Incoming calls must be answered:

  "9-1-1, This line is being recorded. What is Your Emergency?"

- PSAP Telecommunicators must always verify with the caller, the ALI data and determine the exact location at which the caller needs emergency service personnel. The need for assistance may not necessarily be at the location of the caller.

- No caller shall be procedurally required to speak with more than two call-takers: the primary PSAP call-taker and the remote agency call-taker.

  Local procedures shall be developed to advise a calling party that the call is being transferred and to remain on the line.

****

Note: if a TTY call needs to be transferred to a remote agency, that agency must have TTY capability in order for the call to be transferred successfully.

INCOMING CALL PROCEDURES (Cont'd)

- Should a 9-1-1 call be inadvertently transferred from a primary PSAP to the wrong agency, that agency will gather the necessary information and relay the information to the proper agency.

- A public safety agency or private agency that receives a request for emergency service outside of its jurisdiction shall promptly forward the request to the PSAP or public safety agency responsible for that geographical area.

- Any emergency unit dispatched to a location outside its jurisdiction in response to such a request shall render service to the requesting party until relieved by the public safety agency responsible for that geographical area.

    - PSAP Telecommunicators need not identify themselves when answering 9-1-1 calls. This is based on the premise that the 9-1-1 system should be totally transparent to the citizen using it. The citizen need know only that they have reached a 9-1-1 PSAP which will assist them with their incident.

    - If a citizen requests the PSAP Telecommunicator to identify themselves, they will give their last name, the assigned Operator Identification Number, and agency only.

- The telecommunicator must establish the exact nature of the call and obtain verbal confirmation from the caller that no emergency exists before utilizing the recording button. (This feature cannot be use with TTY calls.)

- If the telecommunicator believes that any deployment of resources or dispatch of equipment will be needed to handle the call, regardless of the priority, the recording button shall not be used.

- The use of the recording button is intended to keep emergency 9-1-1 lines free. The recording button shall never be used in a punitive or malicious fashion.

- On line utilization of the recording button is the responsibility of the telecommunicator who activates the recording.

CONTROL OF CONVERSATION/DISTINCT AND COURTEOUS SPEECH

The telecommunicator should keep in mind that a caller to the 9-1-1 system is usually in a stressful situation. They may often be in a highly excited state and incapable of exercising the power of reason. For this and other reasons, the PSAP telecommunicator must be in control of the conversation.

To reduce the possibility of misinformation, the telecommunicator should utilize the following guidelines:

- Always remember:

  At times, a caller will make the telecommunicator a target of their frustration. Do not consider this a personal attack.

  Recognize the cause of frustration and proceed with the necessary steps to resolve the situation.

- Always speak in a calm, competent and decisive tone of voice.

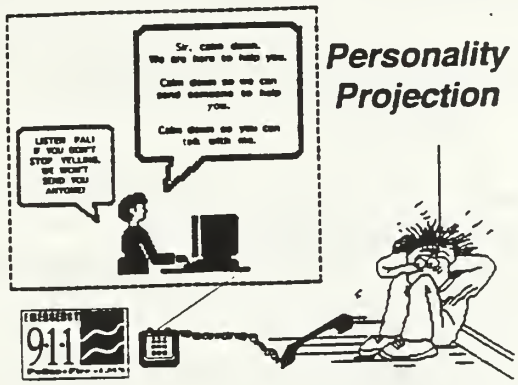
- Speak directly into the telephone mouthpiece. They are made to be spoken into, not across. Do not hold the telephone handset between your neck and shoulder, lay on the desk, or put above the head or position in any way which will make hearing difficult. The headset must be positioned correctly.

- Display an interest in the caller. This often causes the caller to "open up" and makes your job easier to obtain information.

CONTROL OF CONVERSATION/DISTINCT AND COURTEOUS SPEECH (Cont'd)

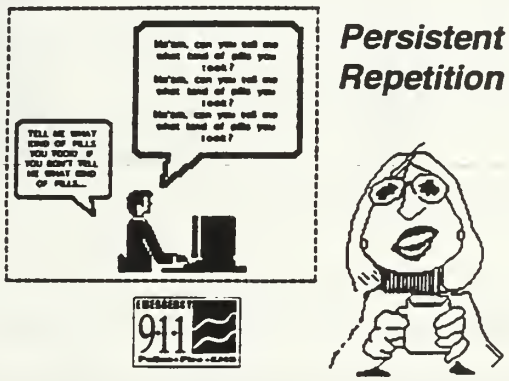
- Explain any waits, holds, or other delays the caller may not understand.
- Suggest alternative agencies or service groups if possible when departmental action is not required.
- At all times, terminate calls positively and courteously.
- NEVER give legal advice.
- Do not use jargon, slang, or abbreviations used among public safety personnel when speaking with the general public.
- Don't let someone catch you off guard when they yell in panic. Keep your composure, take a deep breath, remember you are safe, regain control of the call and calm the caller.

CONTROL OF CONVERSATION / DISTINCT AND COURTEOUS SPEECH (cont'd)



- When encountering the hysterical/emotional caller, the techniques of Personality Projection or Persistent Repetition should be used to overcome the mental state.

  * Personality Projection is defined as those positive verbal actions on the part of the telecommunicator designed to "break through" the emotional barrier of the hysterical caller. (APCO Telephone Techniques, 4-11)



  * Persistent Repetition merely requires that you repeat the described request each time in the same identical way. Do not vary the sentence structure. Be firm and in charge. (APCO Telephone Techniques, 4-11)

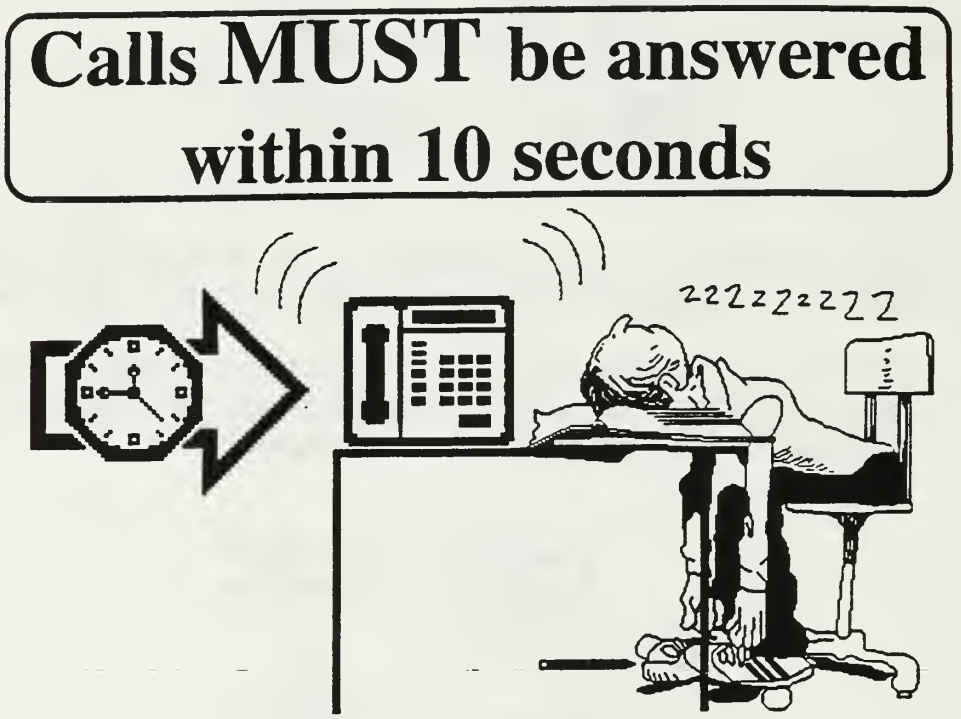
A PSAP Telecommunicator must be able to take control of the conversation while handling the citizen's complaint. If unable to handle the specific complaint, providing acceptable alternatives is necessary.

Most complaints about telecommunicators result from frustration on the part of citizen's to receive a reasonable solution to their problem.

HANDLING MULTIPLE CALLS

PSAP Telecommunicators will frequently receive multiple calls within their centers. It is the responsibility of the telecommunicator to ensure each call is answered promptly and handled in an efficient and professional manner.

The Massachusetts Enhanced 9-1-1 Standards require that 90% of all 9-1-1 calls shall be answered within 10 seconds during the average busiest hour.



All 9-1-1 calls must be given answering priority above 7-digit and administrative calls.

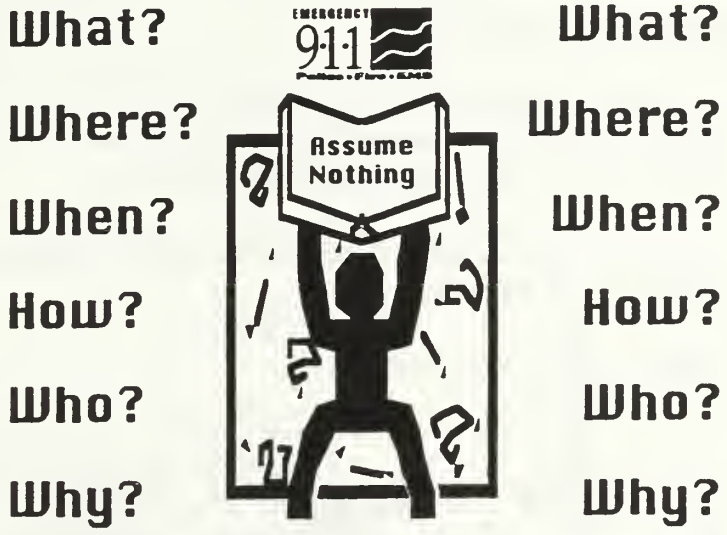
If while you are in the process of handling a priority emergency call and another 9-1-1 line rings, the caller should be told that you are handling another emergency call and you will place them on hold and get back to them as quickly as possible.

Local procedures must be developed at each PSAP site to determine how telecommunicators rank the priority of multiple incoming calls.

In many cases, one major incident will generate numerous calls to 9-1-1. The telecommunicator should be very careful when handling these calls to assure that the current caller does not have a different emergency or have additional important information about the same incident.

THE INTERROGATION PHASE

The PSAP Telecommunicator must be inquisitive. The average citizen does not call 9-1-1 on a regular basis. Many citizens may only call once or twice in their life. For this reason, a telecommunicator must ask questions that are important in determining what type of response is needed in order to effectively handle the emergency. A good way to start asking questions is by using the following:



WHAT	What happened?	**HOW**	How are you involved?
	What is wrong?		How many are involved?
	What is occurring now?		How often does this occur?
	What did he/she look like?		
WHERE	Where is it occurring?	**WHO**	Who is calling?
	Where are you right now?		Who is being ____?
WHEN	When did this happen?	**WHY**	Why did this happen?
	When is this going to happen?		Why is this person here?
	When did you notice _____?		

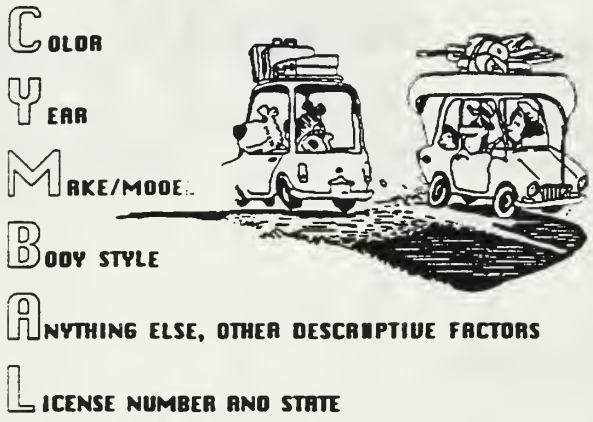
THE INTERROGATION PHASE (Cont'd)

These questions do not need to be asked in this particular order. Ask them in the order of importance for the particular incident you are handling.

- Ask pertinent questions. Ask questions relative to the situation.
- NEVER ASSUME ANYTHING

  -Be accurate and obtain specific information.
  -Be careful of relative terms such as time, distance, and slang.
  -Have the complainant repeat essential information.

- For a person, get a physical description: sex, age, race, height, weight, glasses, facial hair, complexion, shoes, coat, hat, etc.
- For a vehicle, use the "CYMBAL" rule:



The facts relating to the emergency will help both the caller and the PSAP Telecommunicator determine the exact extent of the emergency.

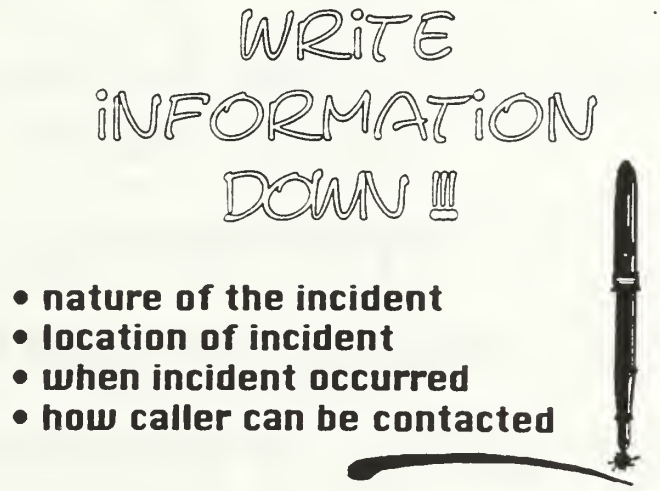
- Take charge of the conversation
- Sense the needs of the caller
- Ask pertinent questions.

WRITE INFORMATION DOWN

PSAP Telecommunicators should make sure they WRITE INFORMATION DOWN. Often in the course of an emergency call, important details left to memory are forgotten or overlooked.

WRITE INFORMATION DOWN !!!

DON'T LEAVE DETAILS TO MEMORY !!!



At a minimum, be sure to obtain the following information:

- The nature of the incident
- Location of incident
- When the incident occurred
- How the caller can be contacted

Local procedures should be followed in determining what happens to the notes you make during a 9-1-1 call. At a minimum:

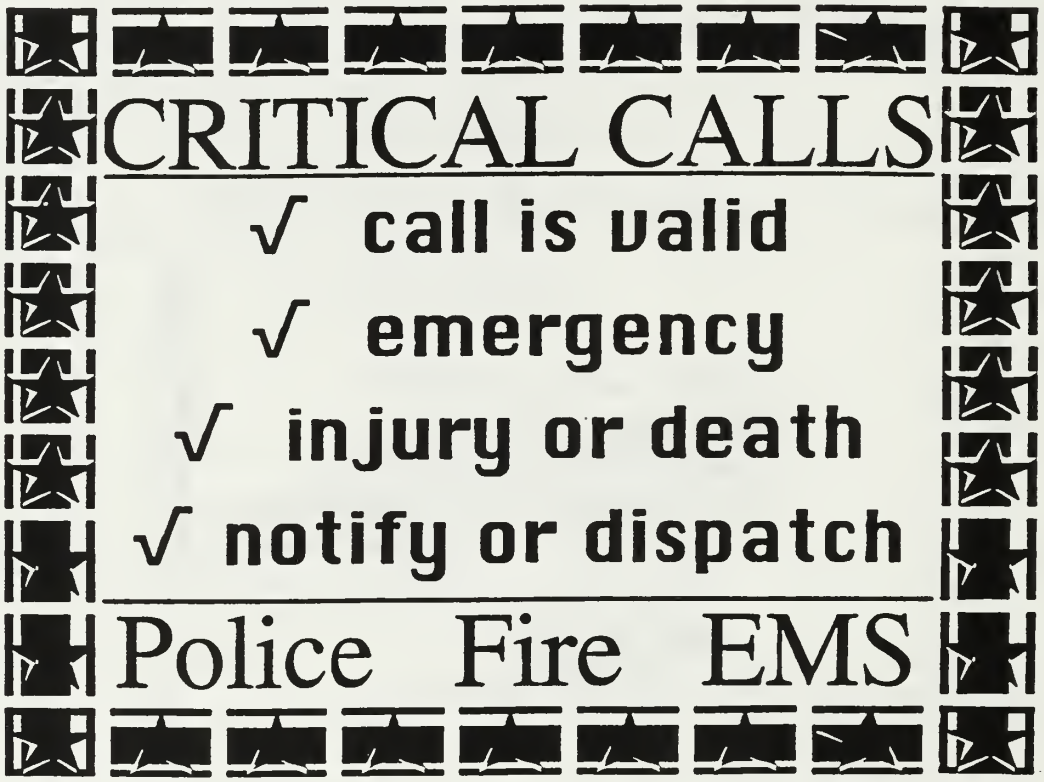
If this information is written on scrap paper, the paper should be thrown away at the end of the shift.

If this information is written into a log book or other bound notebook, the document should be handled as confidential material.

HANDLING CRITICAL/NON-CRITICAL CALLS

Many 9-1-1 calls involve Critical, "Life or Death" situations, while others are Non-Critical. Determine whether the call is Critical or Non-Critical, then handle the call appropriately.

Use the following guidelines for **CRITICAL** calls:



1. On all violent crimes or emergencies in progress, fire calls, or EMS calls:

   - Obtain only sufficient information to determine:

     A. The call is valid
     B. The emergency is "in-progress" or has just occurred.
     C. There exists a potential for injury or death.

2. Transfer the call to the appropriate agency, or if the PSAP is responsible for dispatching the emergency response unit, request that the caller "hold" and:

   - Immediately notify the dispatcher, or
   - Dispatch the appropriate units.

HANDLING CRITICAL/NON-CRITICAL CALLS (Cont'd)

3. For fire calls:

- Every home and building should have a fire escape plan to include information on which way to exit a location and where to go after safely leaving the building.
- The caller should be advised that all persons in the building should leave.
- Ask the caller to go to the nearest phone in a safe location after exiting and call back with additional information on the fire.
- Once all the pertinent information has been gathered, advise the caller to proceed to the safe predetermined location and wait for the firefighters to arrive.

For NON-CRITICAL calls, if there is to be an extended time lapse from the time the call is received to the time a unit is dispatched, do the following:

1. Explain the reason for the delay to the caller.
2. Advise the caller a unit will respond as soon as possible.
3. Request they call back if circumstances change.

LEGAL ADVICE

PSAP Telecommunicators may not always be able to satisfy the desires of the caller. This pertains to legal advice and other types of assistance.

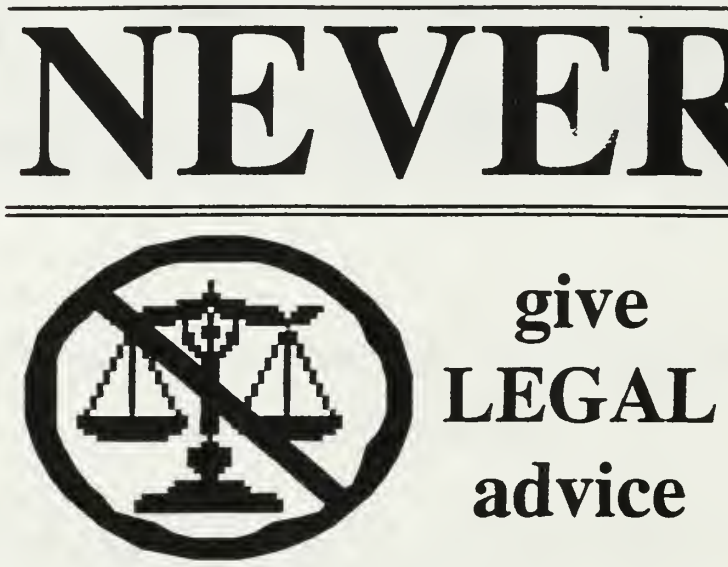
For instance, the caller may be requesting that the police department take action in a situation where no legal law enforcement acts may be initiated.

The PSAP Telecommunicator:

- Should always attempt to provide the caller with acceptable alternatives in which no departmental action may be initiated.
- Suggest other agencies or service groups that may assist the caller with the problem.

Use the following guidelines when confronted by requests for legal advice and the like:

- **DO NOT** provide legal advice to callers.
- Suggest alternate action that a caller may take.



REMEMBER !!!

Failure on the part of the PSAP Telecommunicator to provide acceptable alternatives generates frustration and/or belligerence on the part of the caller.

SPECIAL CALL HANDLING

The following guidelines are minimum standards that a PSAP Telecommunicator must keep in mind when encountering certain types of calls that require special attention. It is extremely important that telecommunicators process silent calls, abandoned calls, and hang-up calls. Failure to do so could result in the loss of life and/or property.

- Silent Calls

  * When it is determined that a call is silent and a verbal response can not be obtained, the telecommunicator should enter the TTY mode and send the first preprogrammed message.

  * If there is still no response, the telecommunicator should follow local procedures, and send the appropriate units to investigate the call.

- Abandoned Calls

  * If an abandoned call is received (the APU will indicate this with an inverted telephone), the telecommunicator should use the ANI STORE/REDIAL (ANI STO/RCL & RD) feature to redial the caller's telephone number.

  * If, when calling back, there is no answer, the telecommunicator should follow local procedures and send the appropriate units to investigate the call.

  * If, when calling back, the phone is answered, the telecommunicator should never assume that this is the person who made the original call or is the one in distress.

  * The telecommunicator should try and determine if a problem exists and the nature of the problem prior to identifying themselves.

  * If the caller is vague or is giving confusing answers, units should be dispatched (dependent on local procedures) to the location on the ALI screen; informing the units on the type of call and undetermined emergency.

SPECIAL CALL HANDLING (Cont'd)

- Hang-up Calls

  * A hang up call is a call placed to 9-1-1 which the caller is disconnected before the call taker is satisfied with the information obtained or the resolution of the call.

  * The telecommunicator should STORE (ANI STO/RCL) the ANI information and make a note of the number and circumstances of the call dependent upon local procedures.

  * A telecommunicator should immediately notify police, fire, or emergency medical services before attempting a call back if the circumstances of the hang-up call warrant such action (example: screaming or gunshots heard).

BOGUS CALLS

It is possible for a PSAP to receive a 9-1-1 call without a caller actually dialing 9-1-1. Persistent or unusual situations should be reported to the SRC for further investigation.

These calls are called BOGUS CALLS which result from:

- Misdialing - the caller was dialing another number. The digits "911" were possibly part of the attempted number.
- Phone repairs - repair service on the lines can accidentally generate false calls.
- Severe weather - high winds, severe thunderstorms, etc., can trigger false calls.
- Static - extreme static associated with phone lines can cause a false dialing of 9-1-1.
- Cordless phones - may cause a continuous out-pulsing of digits which can result in a 9-1-1 call.

REVIEW

DIRECTIONS: Fill in the blanks.

1. The information appearing on the ALI Screen _ _ _ _ _ _ _ _ _ displays the scene of the incident.

2. The information on the ALI Screen must _ _ _ _ _ be passed along to the caller.

3. The Telecommunicator _ _ _ _ verify the ALI Screen data.

4. No caller shall be procedurally required to speak with more than _ _ _ call-takers.

5. A call handling technique that is defined as those positive verbal actions on the part of the telecommunicator designed to "break through" the emotional barrier of the hysterical caller is known as _.

6. Telecommunicators should prioritize multiple incoming calls according to _.

7. The _ _ _ _ and _ _ _ _ _ _ _ _ _ _ _ _ of your voice can sometimes say much more than the words.

8. All incoming 9-1-1 calls must be answered within _ _ _ seconds of the receipt of the call.

ANCILLARY EQUIPMENT & MAINTENANCE

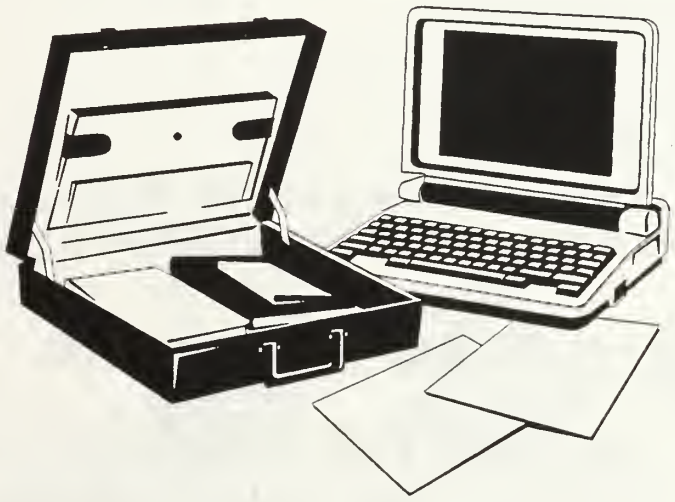
CONTENTS

OVERVIEW

The E 9-1-1 equipment installed at many PSAP's will have certain ancillary equipment installed at the same time. Among the types of ancillary equipment are:

- Printers
- Dictaphone® recording systems
- Uninterruptible Power Source (UPS) back-up power system

This lesson will describe and explain how these systems operate and how they are maintained.



PRINTERS

Each Primary PSAP will be equipped with at least 2 printers.

- One will serve as the Primary and the other as a Standby.
- They will serve as the ALI (Call Detail Record) printers, providing a paper copy of the important information from each call handled by the PSAP.
- The printers automatically print data about each call as soon as the call is completed.

Some of the types of printouts generated by the MAARS system are:

- 9-1-1 Call Detail Records
- Operator Log-On/Off Messages
- TTY Call Detail Records
- System Alarm Messages

The printers will need occasional maintenance, including adding more paper and changing ribbon cartridges. **This routine maintenance is the responsibility of PSAP personnel.**

EACH PSAP IS RESPONSIBLE FOR:

- **KEEPING THE PRINTERS EQUIPPED WITH PAPER AND RIBBONS.**
- **CLEARING PAPER JAMS**

INSERTING THE RIBBON CARTRIDGE

1. Open the access cover.

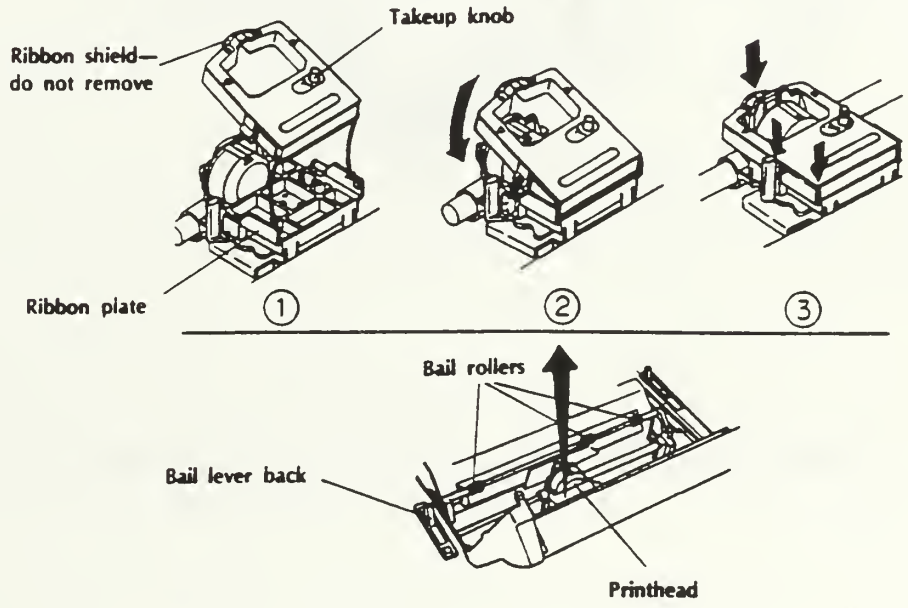
Warning

The print head can get very hot during extended periods of printing-be sure to let it cool off before you touch it. Be sure the power is off before you move the print head.

2. Position the print head between the bail rollers. Make sure the bail is closed (bail lever toward back of printer).

3. Hold the ribbon cartridge with the knob facing up and the flat end toward the front of the printer.

4. Place the flat end into the ribbon plate, then lower the front of the cartridge over the print head until it snaps into place.



INSERTING RIBBON CARTRIDGE (cont'd.)

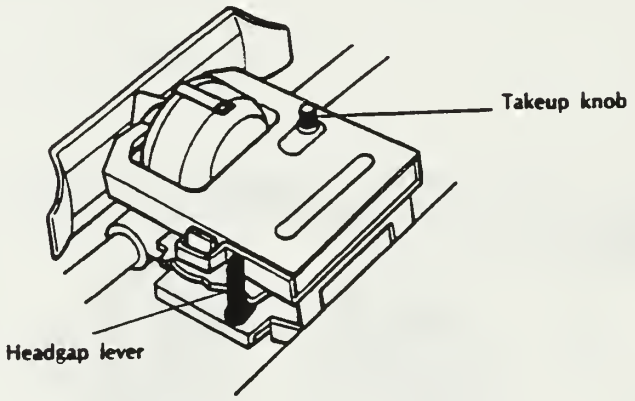
5. Turn the knob in the direction of the arrow to take up the slack in the ribbon.

6. The head gap lever by the side of the cartridge adjusts for different thicknesses. Set it to:

   a. for one or two-parts forms,

   b. for three or four-part forms,

   c. for envelopes and extra-thick paper

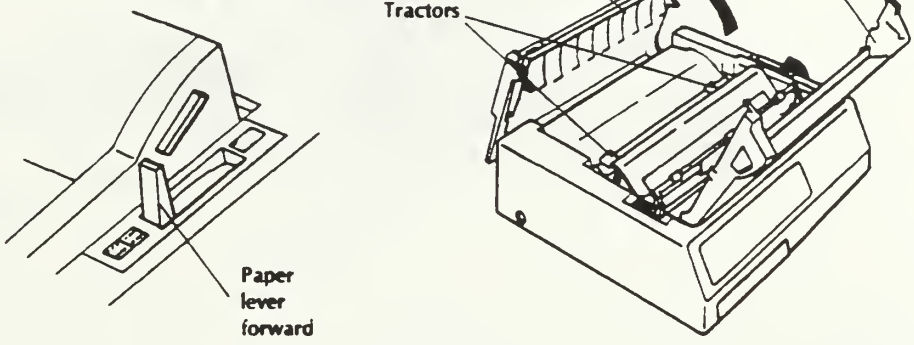


LOADING PAPER - STANDARD PRINTER

The printer can handle many different types of paper with push button ease. Check Appendix E of the Reference Guide for details on paper specifications.

Continuous Forms

1. Make sure the paper is forward.

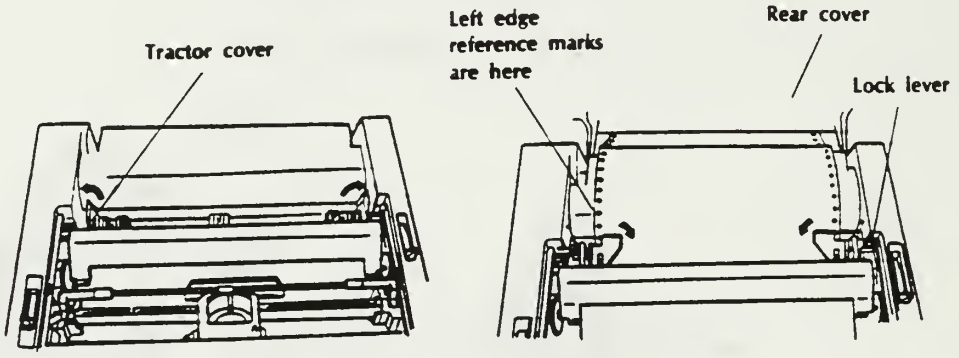


2. Open the access cover and rear cover to expose the tractors.

LOADING PAPER (cont'd.)

3. Open the tractor covers.

4. Pull the paper through the opening between the printer and the rear cover.



5. There are reference marks on the printer to show the recommended left edge position for the two most common paper sizes. Place the first two sprocket holes on each side of the page over the pins. To adjust the tractors for the width of the paper, pull the lock levers forward, slide the tractors into position, then push the levers back to lock.

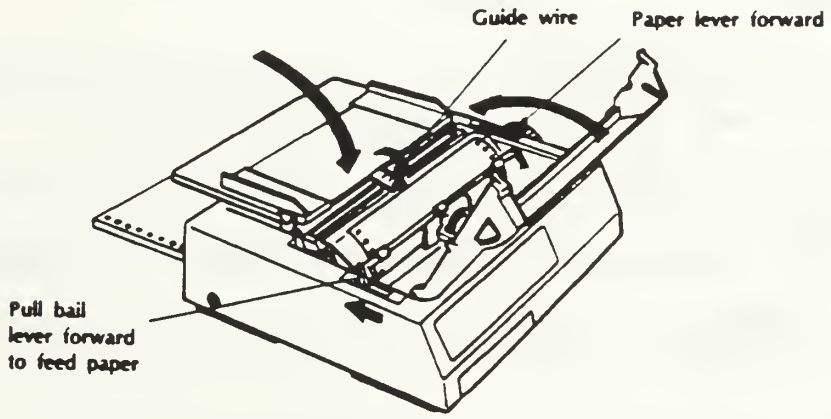
IMPORTANT:

Do not position the left edge of the paper more than 1/2" from the end of the platen. The paper must cover the groove in the left side of the platen; if it doesn't the printer will signal a paper out alarm.

LOADING PAPER (cont'd.)

6. Close the rear cover. Make sure the paper separator is flat on the printer. Open the guide wire, which keeps paper from curling back into the printer. Then close the access cover.

7. Turn the printer on. The print head will move to the left side of the platen and the control panel will light up. The ALARM light will also come on, but don't be concerned: it's just telling you that there is no paper loaded.



8. Pull the bail lever forward. The paper will automatically feed into the printer and the ALARM light will go out. If paper doesn't feed, check to make sure that the paper level is in forward position.

9. Push the bail lever back to close the bail.

NOTE: Do not use the Form Feed button to load paper.

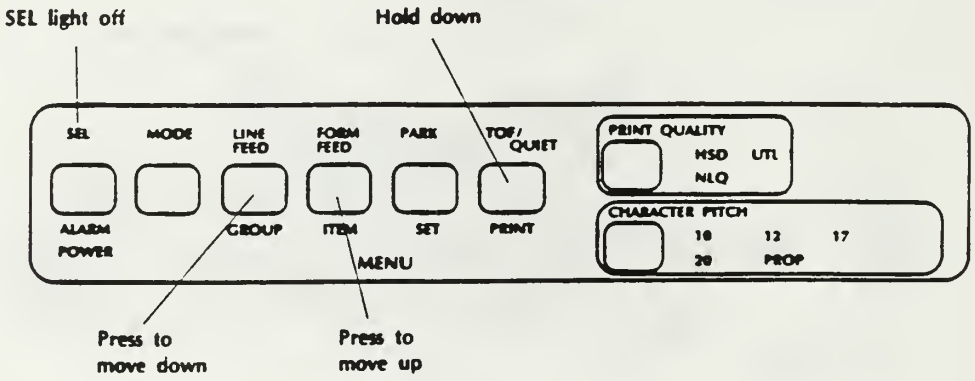
10. Adjust the top of form, then press the SEL button (the SEL light will go on) and you're ready to print.

TOP OF FORM

Make sure the printer is deselected. Hold down the TOF/QUIET button and press:

FORM FEED to move the paper up, or
LINE FEED to move the paper down

This moves the paper in very fine increments-1/144" to be exact-so you can position the top of form precisely. The amount you can move the paper down using this method is limited to avoid potential paper jams.



The lower red line on the paper shield shows the baseline of the current printing position to help you place the top of form where you want it.

IMPORTANT:

Make sure the paper is held in place by the bail. If the top of the page is set below the bail, paper will catch on the bail and cause a jam.

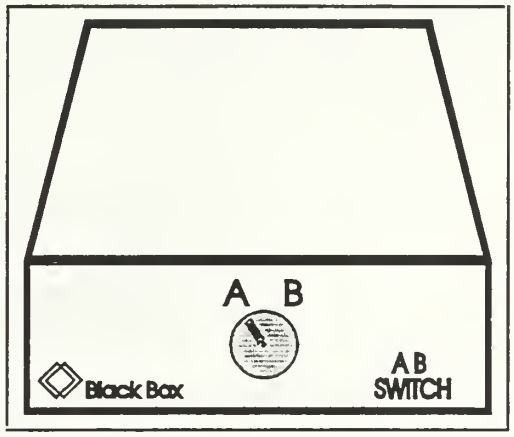
When the top of form is set where you want it, no further action is required. The position is recorded permanently in the printer's memory-even when the printer is turned off-until you reset it.

PRINTER PROBLEM SOLVING & MAINTENANCE

A/B SWITCH BOX

If a printer becomes disabled and cannot be repaired quickly, PSAP Telecommunicators should activate the Standby printer. This is done by turning the switch on the A/B Switch Box to the opposite position (A to B, or B to A).

The A/B Switch Box looks like this:



Here are some of the most common printer problems and how to solve them.

What if . . .

. . . nothing happens at all when I turn on the printer?

The printer may not be plugged in. Check the power cord connection to the printer and the outlet. If you're using a power strip, make sure it's turned on.

. . . the ALARM light goes on?

You may be out of paper, or the paper has jammed. The SEL light will also go out, so when you've reloaded paper, press the SEL button. If the ALARM light doesn't go out when you reload paper, then there is probably a malfunction in the printer that requires service, call the SRC.

. . . the printer doesn't print when the computer sends it data?

The printer may be deselected-if the SEL light is out, press the SEL button.

. . . the paper keeps jamming?

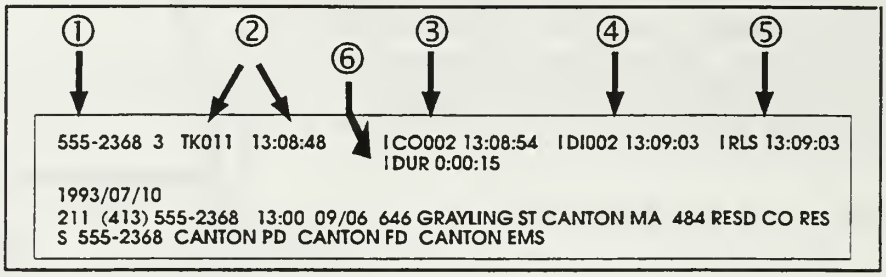
Be sure to set the top of form so that the paper is held in place by the bail. If the top of the page is below the bail, it will catch on the bail as it advances. Don't use the Form Feed button to load paper into the printer.

Cleaning

Every six months (or after about 300 hours of operation), take a clean dry cloth and dust the area around the carriage shaft and platen. Be sure to remove any loose particles of paper. Don't use solvents or strong detergents on the cabinet. Be sure to turn the printer OFF before cleaning.

CALL DETAIL RECORD

Each time a call is processed at the Primary PSAP, certain data is stored by the system and a permanent record of the call is sent to the system printer. The 9-1-1 Call Detail Record, with Compressed ALI, looks like this:



The 9-1-1 Call Detail Record shows:

1. Calling party's telephone number (ANI) was 555-2368.
   (**NOTE:** The Numbering Plan Digit (NPD), 3, follows the telephone number on Call Detail Records) (1 = 617, 2 = 508, 3 = 413, 0= Rhode Island or Vermont).
2. Trunk Number 011 began to ring into the PSAP at 13:08:48.
3. The call was answered by Position Number 002 at 13:08:54.
4. The call was Disconnect at 13:09:03.
5. The 9-1-1 trunk released (became available for another call) at 13:09:03.
6. Total duration of the call (call began to ring until the trunk released) was 00:00:15.

CALL DETAIL RECORD LEGEND

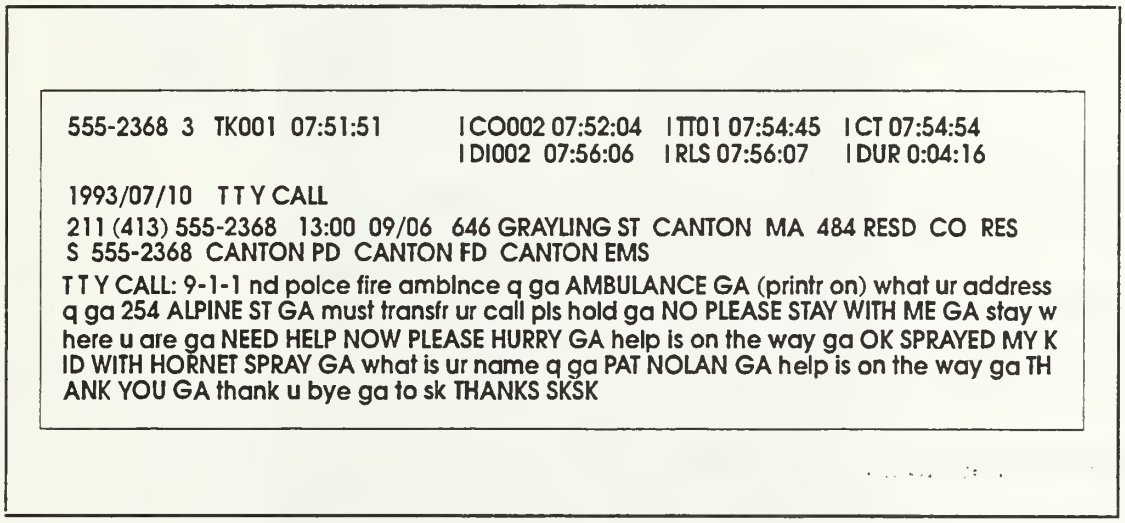
CODE	MEANING	DESCRIPTION
COxxx	Connect	User off-hook on APU # xxx
CT	Cancel Transfer	
DIxxx	Disconnect	User on-hook on APU # xxx
DUR	Duration of the Call	From seizure to release
HF	Hookflash	detected on the line
LNxxx	Line seizure	On LIU # xxx
LTxxx	Line Transfer	On location xxx
RR	Call was re-rung	Called back
RLS	Call released	End of the call
TKxxx	Trunk seizure	On trunk # xxx
TO	Trunk On-hook	Abandoned call
TTxxx	Through Transfer	On location xxx
TUxxx	Direct Transfer	Via DTU on location xxx

CALL DETAIL RECORD (cont'd.)

TTY CALL DETAIL RECORD

The TTY version of the 9-1-1 Call Detail Record is displayed in a different format. The Incoming and Outgoing messages can be viewed on a paper copy, after the conversation has terminated.

When a TTY call has been terminated, the entire call conversation will be queued to a printer.



555-2368 3 TK001 07:51:51 | CO002 07:52:04 | TT01 07:54:45 | CT 07:54:54
| DI002 07:56:06 | RLS 07:56:07 | DUR 0:04:16

1993/07/10 TTY CALL

211 (413) 555-2368 13:00 09/06 646 GRAYLING ST CANTON MA 484 RESD CO RES S 555-2368 CANTON PD CANTON FD CANTON EMS

TTY CALL: 9-1-1 nd polce fire ambInce q ga AMBULANCE GA (printr on) what ur address q ga 254 ALPINE ST GA must transfr ur call pls hold ga NO PLEASE STAY WITH ME GA stay w here u are ga NEED HELP NOW PLEASE HURRY GA help is on the way ga OK SPRAYED MY K ID WITH HORNET SPRAY GA what is ur name q ga PAT NOLAN GA help is on the way ga TH ANK YOU GA thank u bye ga to sk THANKS SKSK

The TTY Call Detail Record shows:

- Calling party's telephone number (ANI) was 555-2368 and NPD is 3.
- Trunk Number 001 began to ring into the PSAP at 07:51:51.
- The call was answered (connected) by Position Number 002 at 07:52:04.
- The call was "thru" transferred, using button number 01 (Poison) at 07:54:45.
- The transfer was cancelled at 07:54:54.
- The call was disconnected by Position Number 002 at 07:56:06.
- The 9-1-1 trunk released (became available for another call) at 07:56:07.
- Total duration of the call (call began to ring until trunk released) was 00:04:16.
- The date of the call was July 10, 1993.
- The call was a TTY call.
- The Compressed ALI shows the Incoming and Outgoing messages.

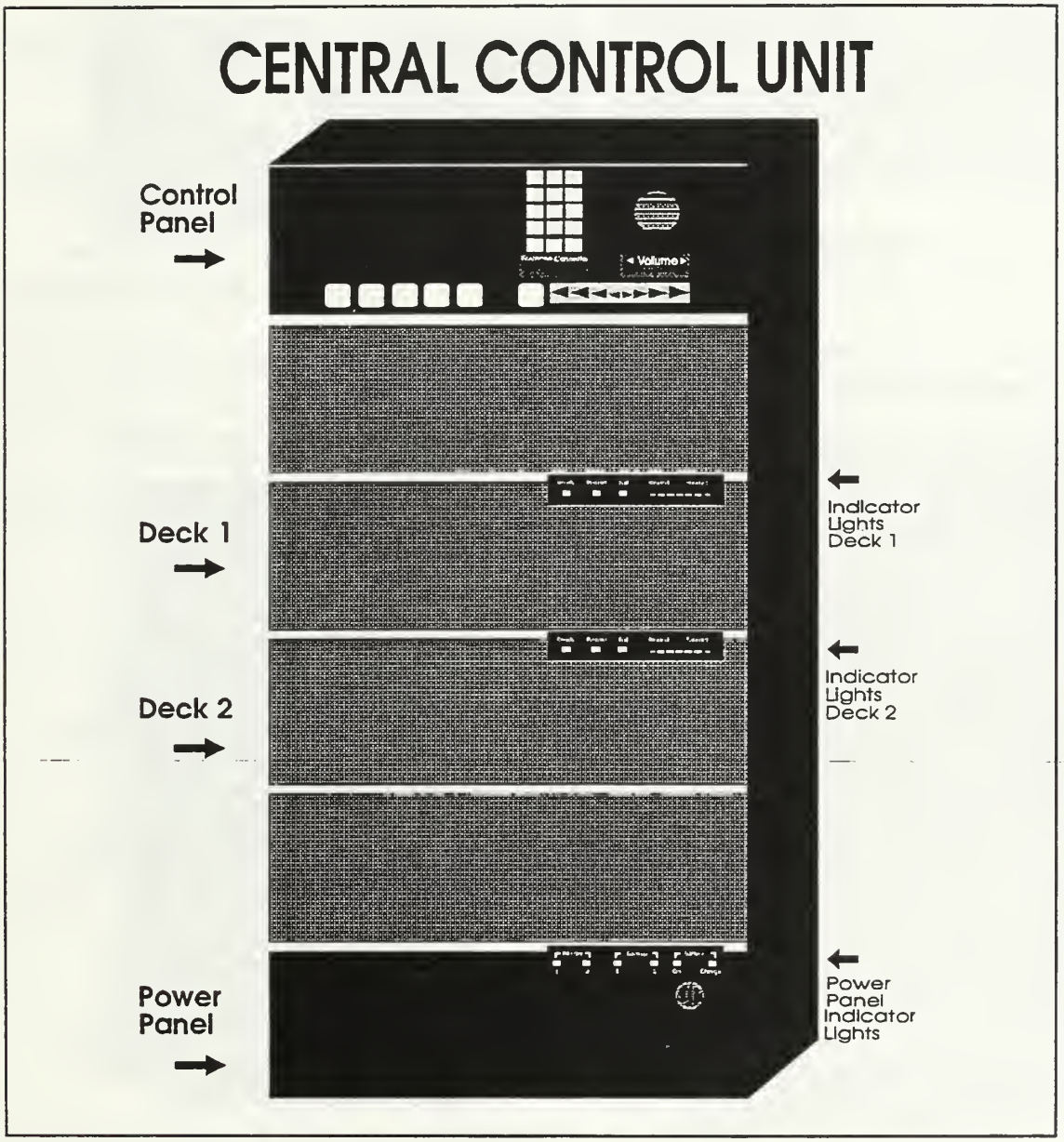
DICTAPHONE® EQUIPMENT

The Dictaphone® Equipment is manufactured by Dictaphone, a subsidiary of the Pitney Bowes Company of Connecticut. The equipment to be installed at PSAP's throughout the state includes:

- The **Veritrac®** Series 9000 Recording System, made up of:
  - Central Control Unit
  - Deck 1 and Deck 2 (tape decks)
  - Amplifier equipment
  - Power Supply
  - Cassette Rerecord Panels
  - Spoken Time Code Converter
- The Series 6600 Digital, On-Line Logger (Call Check Units), located at APU positions.

DICTAPHONE® VERITRAC® SERIES 9000 VOICE COMMUNICATING RECORDING SYSTEM

The Dictaphone Veritrac Series 9000 Communications Recording System is a multi-channel recorder that provides an accurate record of telephone and radio communications. This system is fully integrated and programmable.

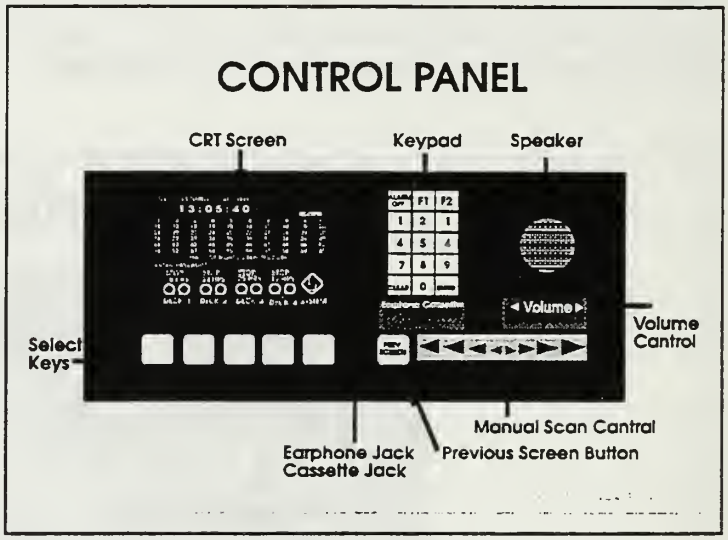


The Veritrac 9000 contains 2 decks which are designed to record the same conversation. One acts as a back-up to the other.

CONTROLS AND INDICATORS

CRT SCREEN

- Provides display of:
  - date
  - time
  - record monitor activity
  - system status
  - current operations
  - alert messages

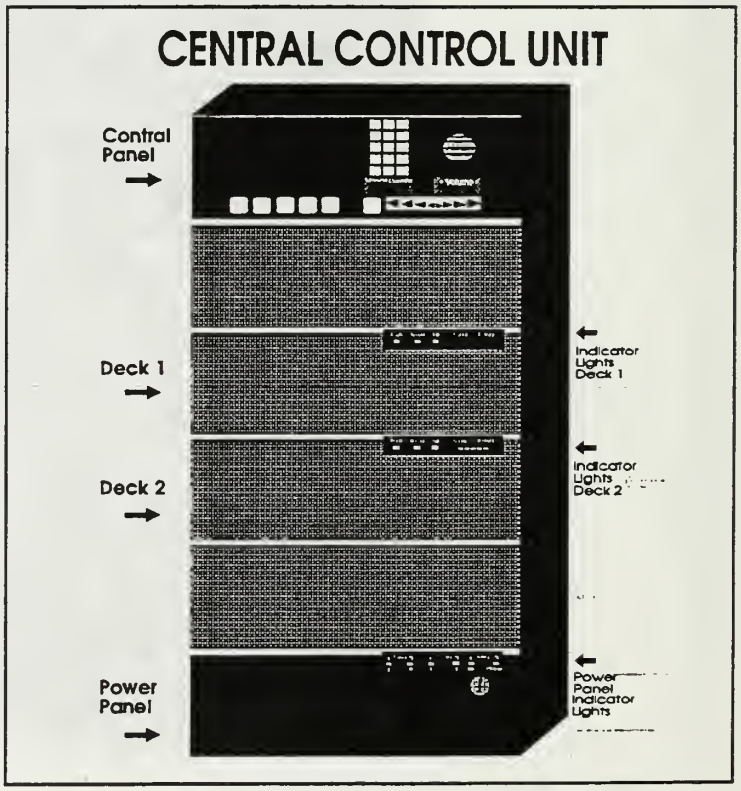


SELECT KEYS

- Located across the lower section of the screen
- The Select Keys allow you to perform desired functions.

KEYPAD

- The keypad is used to select channels for monitoring, recording, playback and to enter all numeric information.



ALARM OFF KEY

- This key is used to shut off an audible alarm.

SPEAKER

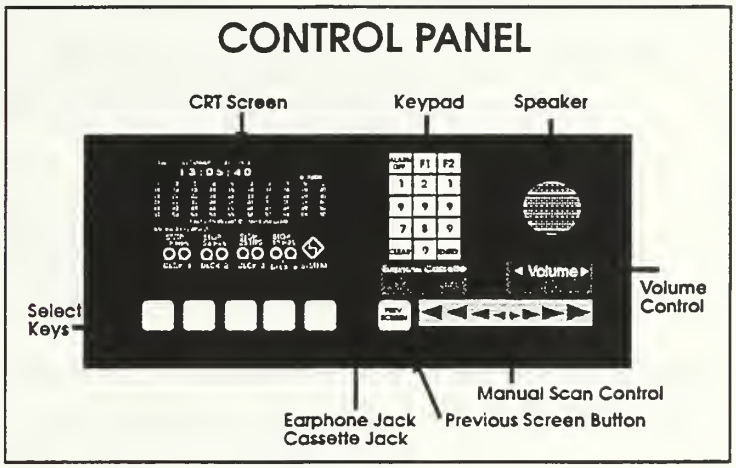
- The speaker provides the audio from the tape during playback or monitoring.
- The speaker will also playback the audio from the Cassette Rerecord Panel.
- When a headset is plugged into the 9000, the speaker is disabled.

VOLUME CONTROL

- Move the Volume slide switch to the left to lower the volume; to the right to increase the volume.

MANUAL SCAN CONTROL

- Located below Volume Control
- Allows you to regulate the speed and direction of tape during scanning with your fingertips during playback.



EARPHONE JACK

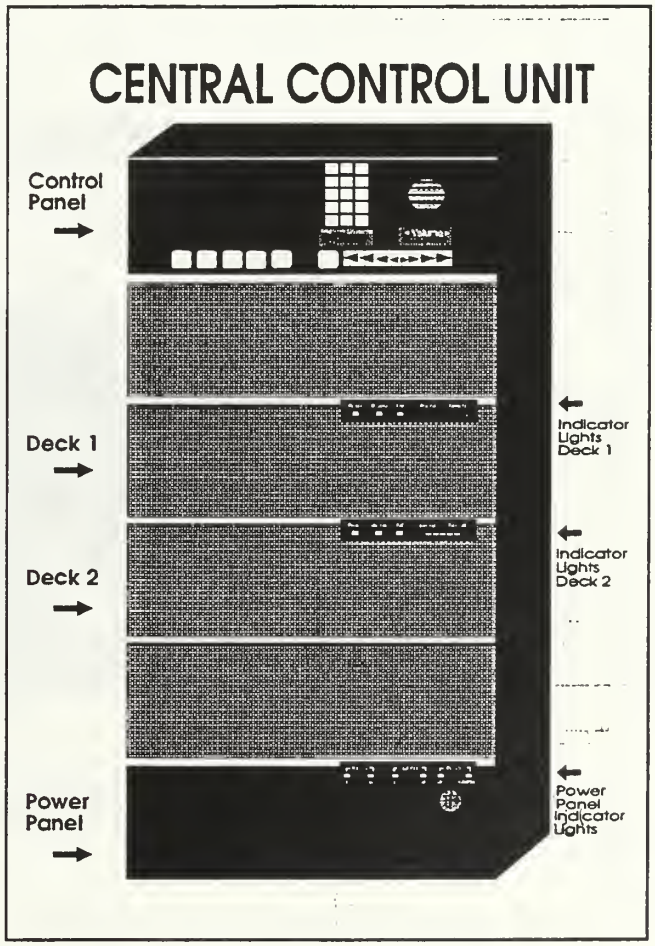
- Located below the Keypad
- Allows for private listening to either input or playback audio

CASSETTE JACK

- Located next to the Earphone Jack
- Used for rerecording purposes

PREVIOUS SCREEN BUTTON

- Located below earphone jack
- If you press this button when the Main Front Page is displayed, you will "log-off".
- This also allows you to back out of any screen.



INDICATOR LIGHTS

- On Deck 1 & 2, symbolize tape motion functions such as: ready, record, rewind, and forward, as well as fail conditions.

POWER PANEL INDICATOR LIGHTS

- Symbolize primary, backup and battery status functions.

POWER PANEL ON/OFF KEYS

- Used to turn Power Panel on/off

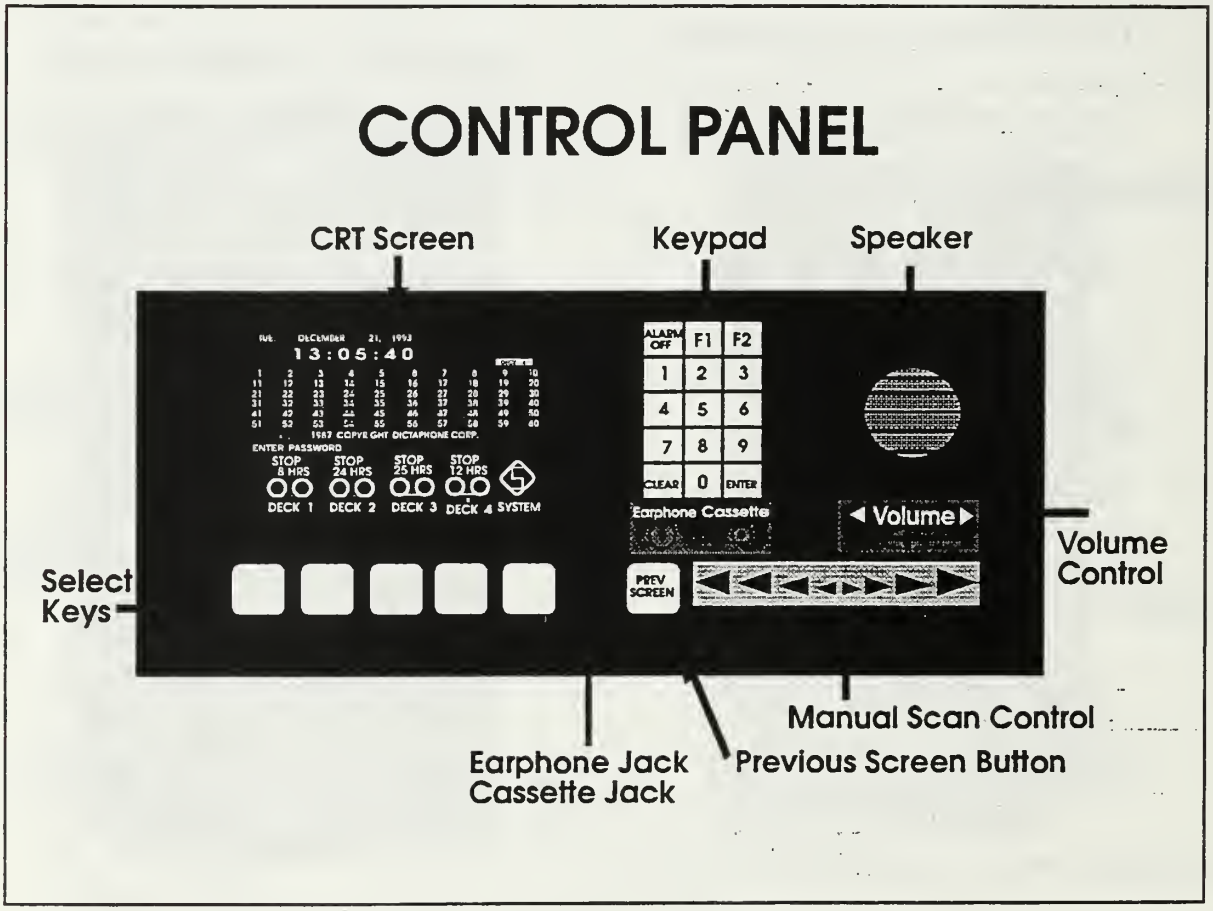
ENTERING A PASSWORD

After the Password Setup has been completed, log into the system as follows:

1. Press any select key to display the Front Page. If the CRT screen is blank, press any select key to display the ENTER PASSWORD prompt. A beep sounds and the ENTER PASSWORD prompt appears.

2. Enter a valid password. (You have approximately 30 seconds to begin entering your password. Once password entry begins, the prompt changes to PASSWORD XXXX and you have approximately 30 seconds to complete the entry.

NOTE: Your password will only allow you to access decks that are assigned to you during the password setup.



LOADING THE TAPE

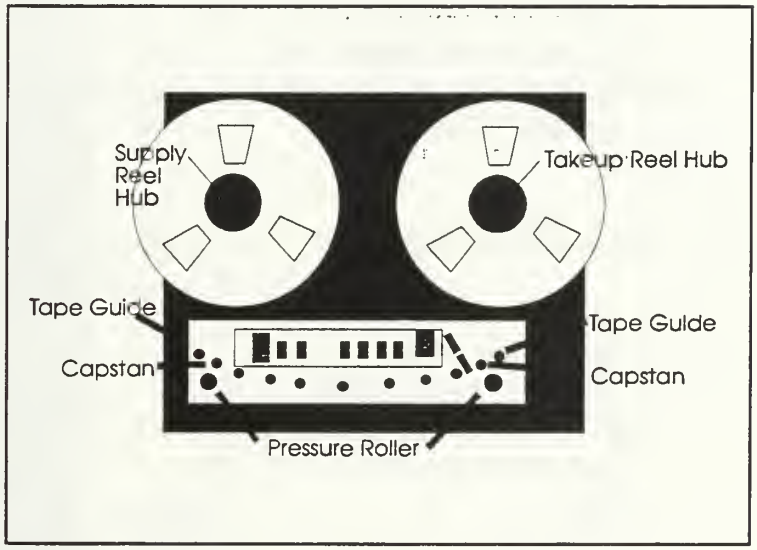
INSTALLING TAPE REELS

If required, enter password to unlock desired transport drawer(s). Only one drawer at a time can be accessed. (Each drawer also has a key to unlock it in an emergency).

- Remove recorded tape after rewinding.
- Mount the supply reel on the left tape hub.
- Position the reel so the three small cutouts in the center of the reel fit over the matching tabs on the hub.
- Grasp the part of the hub which protrudes through the center of the reel and pull toward you, rotating the hub clockwise 1/16 turn and release.

CLEANING HEADS AND TAPE PATH

- Using Dictaphone cleaning pads (or equivalent), clean the heads first.
- Then wipe anything that the tape touches.
- Always do this procedure with every tape change.



THREADING TAPE

- Unwind 2-3 feet of tape by manually rotating the supply reel counterclockwise.
- Grasp the tape with both hands (with the dull side toward you).
- Carefully insert tape into the slot between capstans and pressure rollers, threading the tape around both tape guides.

SECURING THE TAPE

- Wind the end of the tape on to the take-up reel.
- Hold the tape on the reel while manually rotating the reel counter-clockwise a few turns until the tape is secured.

RECORDING

Enter a valid password (Level 1, 2 or 3) for accessing transport functions; (a Level 1 password permits access using the deck controls, but not via the select keys or remote controller): To place a deck in record mode, first make sure tape is properly loaded on the deck(s) where recording will take place.

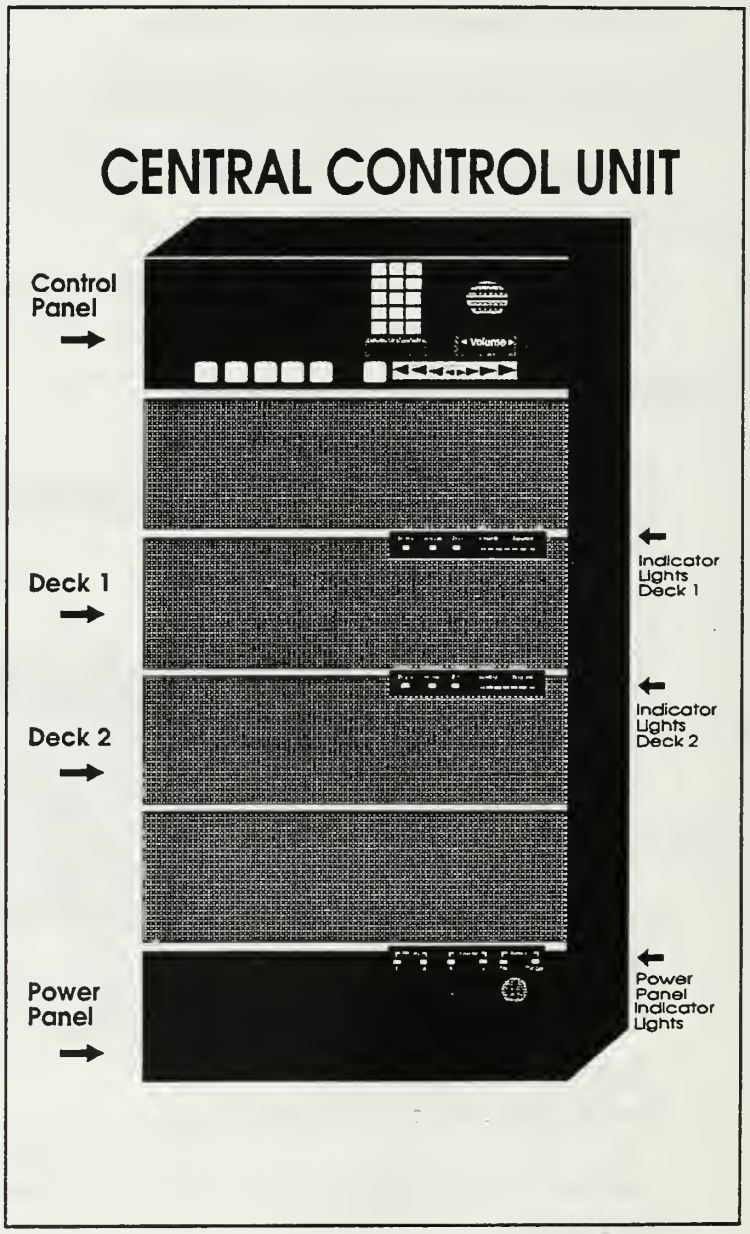
1. On the Main Front Page, press the key under the number of the deck you wish to record on. The deck number you selected appears at the top of the screen under the key icon.

2. On the next screen (Record Page) the prompt PRESS ENTER TO AUTO RESTORE may display. Respond to the prompt (see Auto Restore), or press the key under READY.

3. Press READY key.

4. Press the key under RECORD. RECORD is highlighted, showing that record mode has been entered.

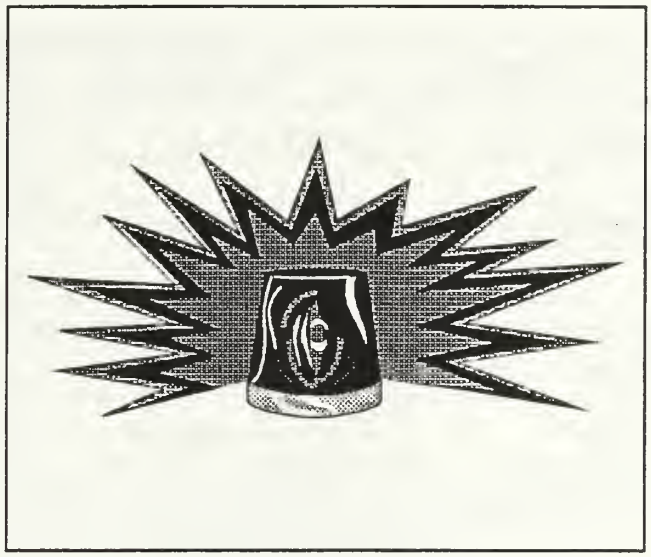
   These steps can also be performed from the controls on the decks.



NOTE: To stop Recording:

- Press key under STOP twice.

ALERT MESSAGES



There are two types of Alert Messages:

- Warnings
- Alarms

    - A Warning is a minor failure.
    - An Alarm is a major failure that may cause a loss of recording; it requires immediate attention.

All Alarms should be reported immediately to the Service Response Center (SRC). The SRC's telephone number 1-800-E911-HELP (1-800-391-1435).

The following pages list the types of Warnings/Alarms and the action that should take when they occur.

SYSTEM - WARNINGS AND ALARMS

Warning/Alarm	Explanation	Cause	What To Do
BATTERY ON	Battery in use	AC Power failed	Restore AC Power
EEPROM ERROR	System parameters corrupted	EEPROM defective	Call SRC
CRT ADDRESS ERROR	CRT H/W address out of range	Wrong DIP switch setting on CRT PCB	Call SRC
SYSTEM COMMUNI-CATION FAIL(ED)	CRT Processor not receiving communications	Communications interrupted	Call SRC
CHECK FAN AND FILTERS	Power supply overheating	Fan failure, dirty filters, ambient temperatures too high	Check fans Clean filters
POWER SUPPLY OVER TEMPERATURE	Power supply overheating	Previous warning ignored	Shut off System Call SRC
CHECK DATE/TIME	Time out of range	Clock chip data corrupted	Set time. Call SRC if not caused by extended power failure.
NO TIME SYNC	System running on internal clock	External sync lost AC power lost	Check external sync source. Call SRC
EXT REC OUT OF TAPE	External recorder is out of tape	Out of tape/ Broken tape	Reload tape
EEPROM PROTECTION	EEPROM not available for read/write due to hardware parameter being out of tolerance	System Hardware	Call SRC
POWER SUPPLY N*	A power supply (N) has failed.	System Hardware	Call SRC
*Power supply 1, 2, 3 or 4.			

DECK - WARNINGS AND ALARMS

Messages are preceded by the Deck number. When a deck is placed in Ready mode. If a deck is in record, press READY/RECORD to clear the alert. The messages will clear.

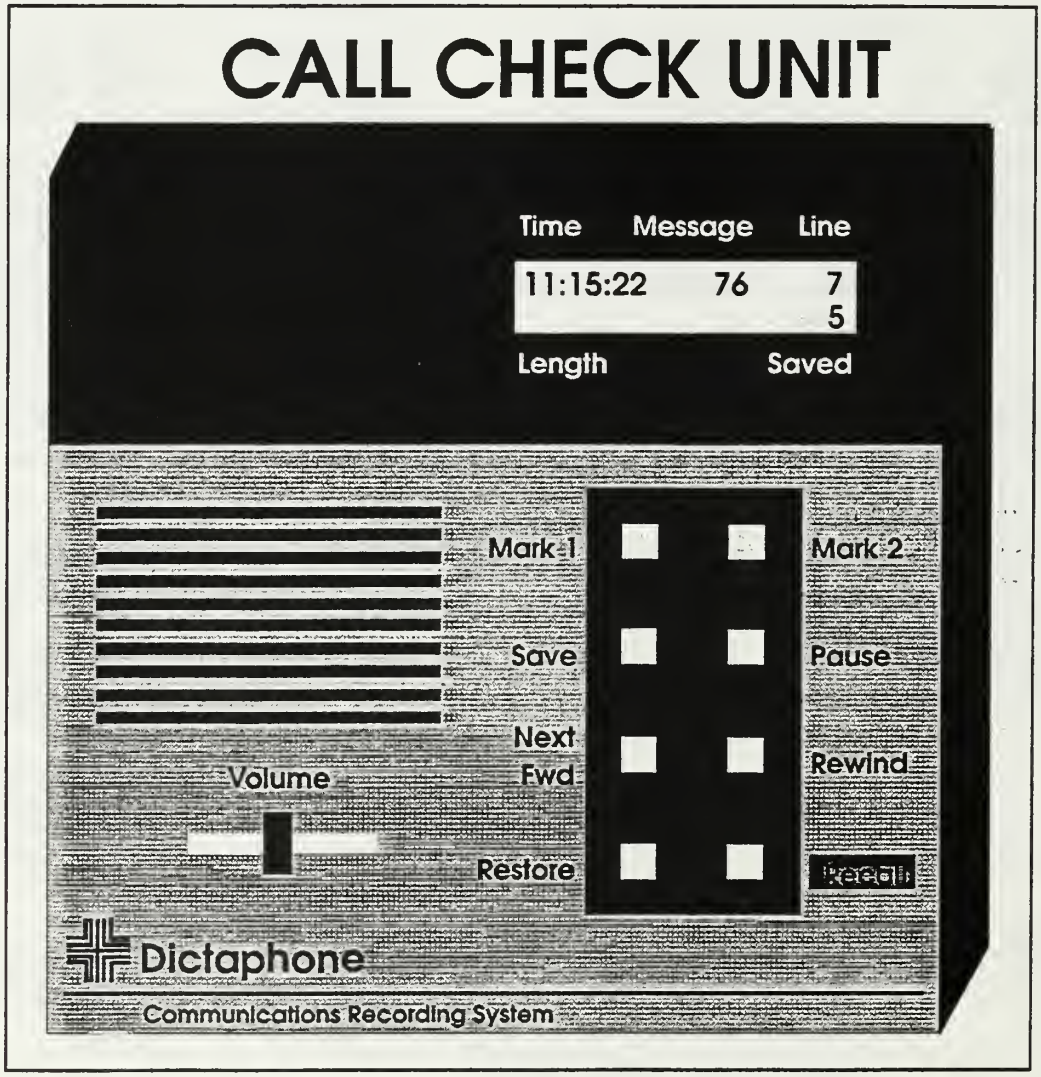
Warning/Alarm	Explanation	Cause	What To Do
DECK # LOAD TAPE	No tape loaded	Various	Load tape
BIAS OSCILLATOR FAIL(ED)	OSC amplitude low	Hardware failure	Call SRC
TAPE BREAK	Supply/takeup reels moving too fast	Out of tape Improper load	Reload tape
SUPPLY STOPPED	Supply reel jammed	Jam or motor failure	Clear jam. Call SRC
TAKEUP STOPPED	Takeup reel jammed	Jam or motor failure	Clear jam. Call SRC
SAFESCAN	Safe Scan failure when first detected unless in next two categories	Time code error, bad tape, dirty heads	Clean heads, check tape path, change tape. Call SRC
SAFESCAN SINGLE	Safe Scan failed and recovered	Same as above	Same as above but do not call SRC
SAFESCAN MULTIPLE	Safe Scan failed and recovered more than once	Same as above	Same as above Call SRC
BACKUP AMPS IN USE	Backup amps in use	Primary amp or	Place deck in Stop, Ready, Record. If alert persists, Call SRC
COMM FAILED	No deck communications	Deck processor or cable problem	Call SRC
UNABLE TO XFER	Deck failure or end of tape imminent. Also, no deck programmed for transfer or programmed transfer deck has failed. Transfer not possible.	Target deck not ready, failed or off line.	Place target deck in Ready mode.

DICTAPHONE SERIES 6600 DIGITAL ON-LINE LOGGER

The Series 6600 Digital, On-Line Logger automatically records messages for immediate replay. The system can record and play messages received from up to eight communications lines (e.g., telephone or radio).

Operators use a control console to monitor the messages.

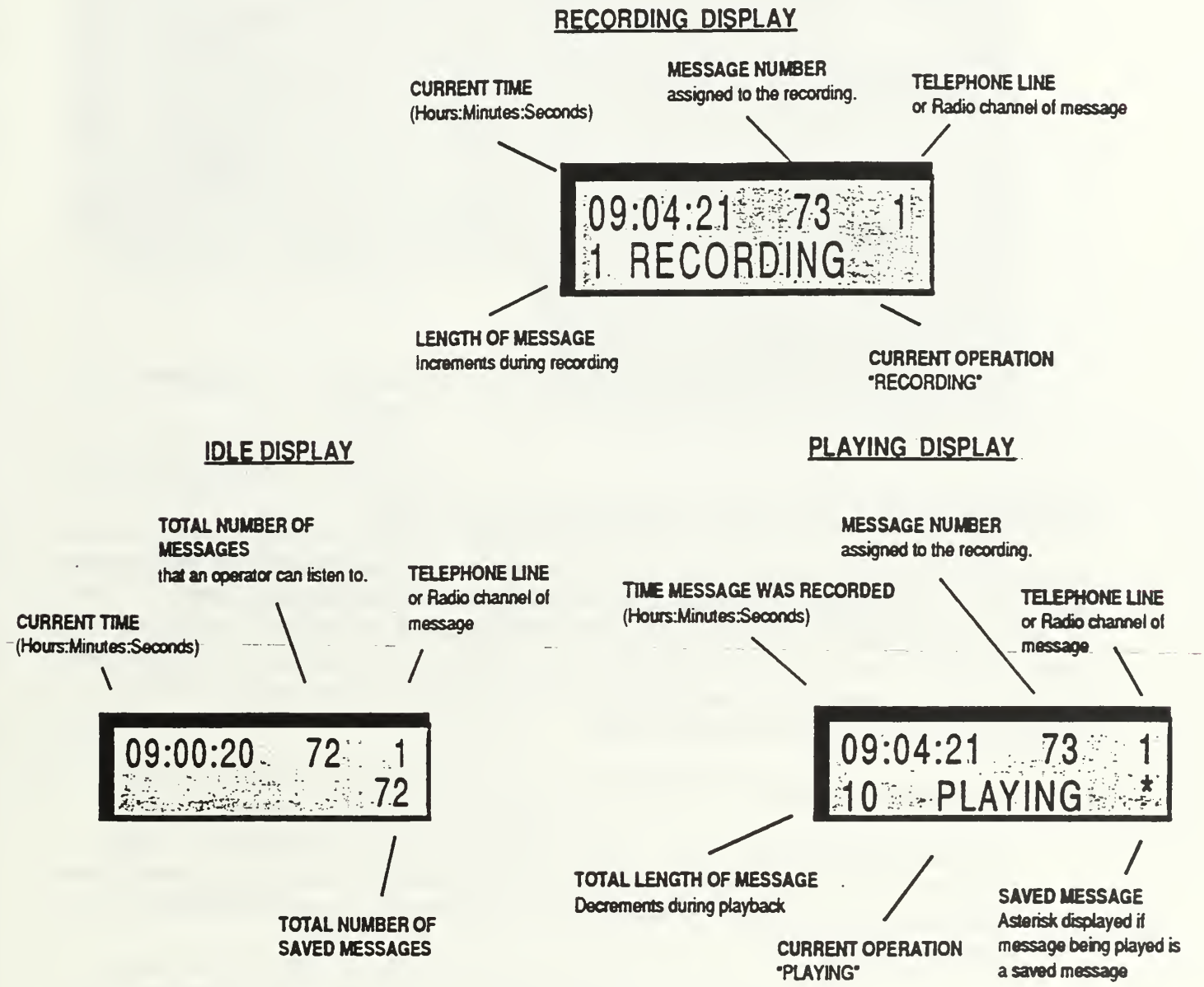
Each control head is dedicated to a specific APU and will allow you to playback calls made on that APU. Every time you pick that phone up, it will be recorded, not only here but also on the 9000.



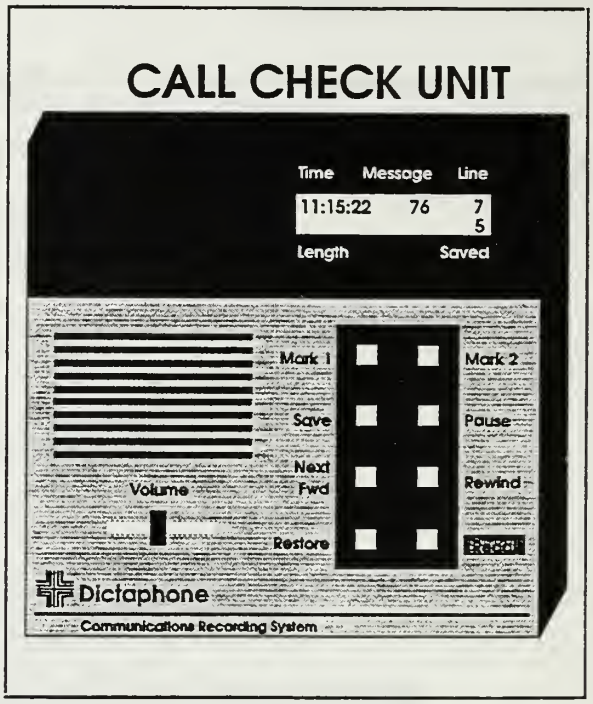
DIGITAL DISPLAY

There are three types of displays: Idle, Recording and Playing.

The current time is shown in military time or when in playback it shows the time of the call you're listening to.



OPERATING PROCEDURES



LISTENING TO THE MOST RECENT MESSAGE

To listen to the most recent message -

1. Press the **(Recall)** button. The most recent message begins playing. The recall LED turns on, the word "PLAYING" appears on the display.

2. Press **(RECALL)** again if you want to replay the entire message. To replay the entire message you must first listen to at least (3) seconds of playback before pressing (Recall).

3. Press **(RESTORE)** to cancel playback, or alternately press the (Pause) button to stop and start playback. For additional commands, refer to the Rewind, Save and Next Fwd headings.

LOCATING AND PLAYING EARLIER MESSAGES

There are three ways to locate a message: by message number, by time and by actual audio verification. You can use the (Recall) button to step your way back through all the messages. If you know the approximate time the message was recorded or possibly the message number, then you can stop and verify the recording once you find a match. If after a few seconds of playback you realize that you have found the wrong message, you can continue searching by pressing (Recall) again.

To listen to earlier messages -

1. Press the **(Recall)** button twice. This will step you back two messages and begin playback. If you want to step back even further, continue pressing the (Recall) button until the message you want to hear appears in the display - check the time and message number.

Example: If you start a message 76, press (Recall) twice to play message number 75. To play message 74, press (Recall) three times, etc.

2. Press **(Restore)** to cancel playback, or alternately press the (Pause) button to stop and start playback. For additional commands, refer to Rewind, Save and Next Fwd headings.

OPERATING PROCEDURES (cont'd.)

REWIND

There are three types of rewind: Incremental rewind/playback , "real time play" and continuous rewind.

Incremental Rewind/Playback

This command rewinds about one (1) second's worth of recording before beginning playback.

- During playback, quickly press and release **(Rewind)**.

"Real Time Play"

You use this command to briefly rewind and playback a message that is actively being recorded - the "RECORDING" prompt is present. You can only select this operation from the Restore position. Restore places you at the end of the most current message without initiating playback. If you press Rewind from the Restore position, the recorder rewinds about five (5) seconds of the message and then begins playback. If you press Recall from the Restore position, the recorder does a full rewind before playing the entire message.

To rewind and listen to an active recording -

- Press and release the **(Rewind)** button, or the **(Recall)** button, while the word "RECORDING" appears on the display.

Continuous Rewind

To continuously rewind -

- Press and hold down the **(Rewind)** button. When you reach the beginning of a message, the recorder pauses, stops rewind, and plays a tone.

If you continue holding the button depressed, the recorder will rewind into the next message. If you release the button (within one second of hearing the tone), the recorder plays the message shown on the display from the beginning.

OPERATING PROCEDURES (cont'd.)

SAVING MESSAGES

To save a message -

- Press the **(Save)** button during playback or pause. An asterisk (*) appears at the lower right corner of the display. All messages displaying an asterisk are saved messages. Once you save a message, the recorder cannot erase it until the save asterisk is cleared.

CLEARING SAVED MESSAGES

To clear a saved message -

1. Play the message that you want to clear.

2. Press and hold the **(Save)** button until the asterisk clears from the display (about two (2) seconds).

PLAYING SAVED MESSAGES

You can locate save messages from the Restore position.

1. Press **(Save)** to playback the most recently saved message. The Save LED lights. To move to the next saved message, press the (Recall) button. Each additional depression of the (Recall) button will move you to another saved message.

Note: The (Recall), (Next Fwd) and (Rewind) controls operate only among the saved messages once you play a saved message.

2. Press **(Restore)** to cancel playback of the saved message.

NEXT FWD

You use the (Next Fwd) button during playback to select the next newest message in the recorder. If you are playing message number 77, press (Next Fwd) to advance to message number 78. The recorder will continue in playback if you press (Next Fwd) during the most recent message. You can only use (Next Fwd) during playback.

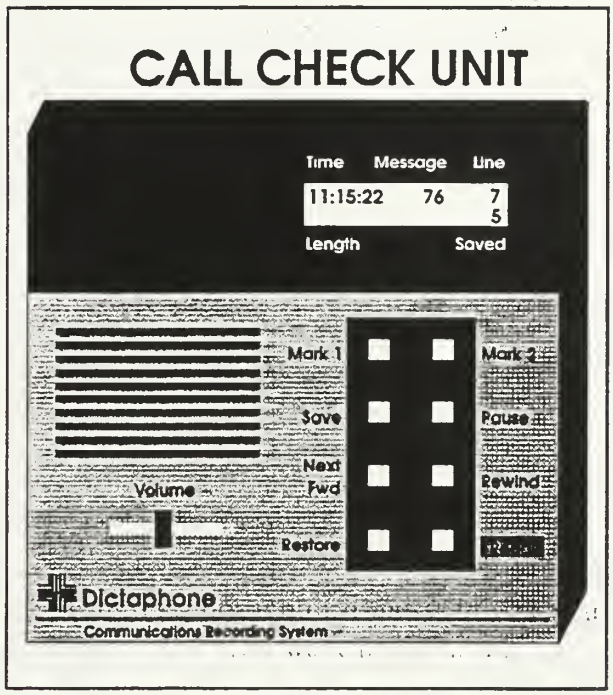
PAUSE

Use the (Pause) button to stop and start playback. The pause LED lights during pause.

OPERATING PROCEDURES (cont'd.)

ISOLATING PASSAGES FOR REPEATED PLAYBACK

You can use the (Mark 1) and (Mark 2) buttons to zero in on a portion of a message that you need to mark the beginning and ending portions of a passage that you want to listen to. Once you mark the passage, you can play it over and over again by pressing the (Recall) button.



To mark the passage -

1. Play the message you need to review.

2. **Press (Mark 1)** when you reach the beginning work of the passage you want to review.

3. Press **(Mark 2)** when you reach the ending word of the passage you want to review.

4. Press **(Recall)** to playback the message from the (Mark 1) position. The recorder will pause playback automatically at the (Mark 2) position. The pause LED is on.

RERECORD

To rerecord messages to another recorder -

1. Plug the rerecord unit into the Rerecord receptacle located on the control panel (located on the left side of the desktop console and the front of the rack mount console).

2. Place the rerecord unit into record. Playback the desired message from the control panel. The message is played through the speaker and the rerecord jack.

CALL CHECK UNIT PROBLEM SOLVING

If "recording" does not light up when you pick-up your phone, call the SRC.

If you don't hear anything in the "playback" mode, call the SRC.

GLOSSARY

This Glossary contains the terms, abbreviations, acronyms and descriptions of the equipment, processes and procedures used in the implementation of Enhanced 9-1-1 in the Commonwealth of Massachusetts.

A

ABANDONED CALL

A call completed to a PSAP, but the caller hangs-up before any information is exchanged. The ANI sto/rcl feature can help to determine if the caller needs assistance.

A/B SWITCH BOX

A switch box used to control which printer in on-line and which is idle.

ADA

Americans with Disabilities Act, signed into law in 1990. Title II of the ADA Act, Public Services, applies to "Public Entities," and has relevance to emergency services. Title II provides that TTY-users must have equal access to emergency services when dialing 9-1-1.

ADD ON (Key)

A Key at the bottom of the APU which allows for the selection of more than one line at a time. There is no limit on the number of lines which can be added, except for the quality of the audio transmission. Each added line decreases the audio quality.

ADMINISTRATIVE (Mode)

The mode entered when an 7-digit line is selected on the APU. TTY calls can be answered when the APU is in the *A* mode.

ALARM MESSAGES

Messages designed to inform the PSAP Telecommunicators of MAARS system malfunctions. Messages will printout on the system printers. The audible alarm can be silenced by pressing **RELAY + 000** (zero three times).

ALI

Automatic Location Identification. The information provided to the PSAP telecommunicator detailing the calling party's name, address, telephone number and other records.

ALI DISCREPANCY FORM

A form provided by the NYNEX to the Municipal Database Liaison persons and used to record and report all ALI discrepancies.

ALI REQ (Key)

The ALI Request Key is located at the top of the column of Function Keys at the right side of the APU. It allows for an ALI to be re-sent.

ALTERNATE PSAP

The predetermined Alternate location which will receive the E 9-1-1 call if the Primary cannot handle it. (full ANI/ALI capability)

ANCILLARY EQUIPMENT

Support equipment installed in each PSAP, including Printers, Dictaphone® recording systems and the Uninterruptible Power Source (UPS) system.

ANI

Automatic Number Identification. The calling party's telephone number, visually displayed on the APU, which triggers the delivery of the ALI.

ANI STO/RCL (Key)

The ANI Store/Recall Key, located at the top of the column of Function Keys at the right side of the APU. It allows the storage of up to 5 ANI/ALI during a 9-1-1 call and the recall of the ANI/ALI when in the *I* (Idle) or *A* (Administrative) Mode.

APCO

Association of Public Communications Officers. A national association of professional emergency call-takers, call-handlers and dispatchers.

APU

Answering Position Unit. The telephone set, either Desktop or Console model, used to answer E 9-1-1 calls at the PSAP.

ASL

American Sign Language. A formally recognized unique and visual independent language. ASL uses a "visual grammar" to form sentences and thus transfer information between two or more persons.

AUDIO (Key)

The AUDIO Key is located in the column of Function Keys at the right side of the APU and is used to control the audio level of the APU. The PSAP Telecommunicator can adjust the Transmit, Receive and Ring Volume and Ring Pitch features.

AVERAGE BUSIEST HOUR

Measurement used in calculating the equipment necessary to handle calls at a Primary PSAP. Each Primary PSAP will have sufficient APU's and staff to ensure that 90% of all calls are answered within 10 seconds, using the Average Busiest Hour statistics.

B

B (Disability Indicator)

Blind. Someone at the address shown on the ALI Display has voluntarily identified themselves as being blind.

BOGUS CALLS

A call which completes to a PSAP, but the caller did not intend to make an E 9-1-1 call. This may occur from misdialing, severe weather, cordless phones, etc.

BUSX

Class of Service code for Off-Premises Extension, Business class of telephone service.

BUSN

Class of Service code for Business telephone service.

C

CALL CHECK UNIT

The common name for the Dictaphone® Series 6600 Digital On-Line Logger, providing for the recording of messages for immediate playback.

CALL DETAIL RECORD

The printed copy of the record of the E 9-1-1 call, showing compressed ALI, date, time, etc., for each call handled at the PSAP.

CALL DETAIL RECORD (TTY)

A printed report of a TTY call, showing Receive data in ***Upper Case*** letters and Transmit data in ***Lower Case*** letters, with compressed ALI, date, time, etc.

CANCEL

The terminating of transfers and system functions.

CANCEL (Key)

A Key located at the bottom of the column of Function Keys on the right side of the APU. It allows the termination of transfers and system functions.

CELLULAR

"Mobile" telephone services, available for vehicle and hand-held applications. Cellular E 9-1-1 calls are routed to designated PSAP's.

COIN

Class of Service code for Coin (pay) telephone lines

CONFERENCE

Adding a third party to an existing, active call, resulting in a Three-Way Conference call. The ADD-ON Key is used for this function.

CONTROL CABINET

Equipment cabinet that contains the circuit boards, power supplies, wiring and associated line and trunk connections for the 9-1-1 system. The Control Cabinet is usually located in an equipment room at the PSAP.

CNTX

Class of Service code for Centrex

CYMBAL

Color; Year; Make/Model; Body style; Anything else (other facts); License number and state, acronym for the questioning method used by public safety officials to gain additional information about an incident.

D

DEFAULT PSAP

A designated PSAP which receives calls when the control tandem switching office is unable to selectively route a call due to trouble, e.g. ANI failure or garbled digits. All calls which cannot be selectively routed will be re-routed to a Default PSAP. A Default PSAP has TTY call-handling capability.

DHH (Disability Indicator)

Deaf & Hard of Hearing. Someone at the address shown on the ALI Display has voluntarily identified themselves as being deaf or hard of hearing.

DIAL PAD KEYS

A group of 16 keys located in the center of the APU. Keys are used to dial numbers or to perform special functions (Recall, Memory, etc.)

DICTAPHONE®

Company providing the voice and radio recording system, located on-site at the PSAP. Dictaphone® provides the Veritrac® Series 9000 Voice Communications Recording System and the Series 6600 Digital On-Line Logger. The Series 9000 is a multi-channel recorder which provides an accurate record of telephone and radio communications. The Series 6600 automatically records messages for immediate replay (see Call Check Unit).

DISABILITY INDICATOR

An indicator on the ALI Display, showing that a person at the address shown has voluntarily identified themselves as disabled.

DISABLE (Mode)

The mode the APU enters when it becomes disabled. When this occurs, a flashing **D** appears on the ANI screen. Call the SRC at 1-800-E911-HELP to report the problem.

DISCONNECT

Breaking the connection to a line. The Red and Green LED's extinguish and the line becomes idle. The RELEASE Key performs this function.

DMC

NYNEX Data Management Center, located at 326 North Main St., Floor #3, Fall River, MA 02720.

E

ELAN

Emergency Local Area Network. The system provided by the MAARS equipment providing data to the APU, ALI screen and related equipment.

EMERGENCY (Mode)

The APU enters the *E* mode when a dedicated E 9-1-1 line is selected. Calls can be transferred to another PSAP and TTY call s can be handled when in the *E* mode.

EMS

Emergency Medical Services. The medical function, including ambulance services, usually performed by a Health Dept., a Fire Dept. or a hired (contract) agency.

ESN

Emergency Service Number. The number contained in each line record which determines where the E 9-1-1 call will be routed.

ESZ

Emergency Service Zone. The locally-established zones within each municipality in which designated Police, Fire and EMS agencies operate.

F

FORCED DISCONNECT

Pressing the Release key to completely disconnect a call. Allows the 9-1-1 trunk to become idle and available for other calls.

FULL SECONDARY PSAP

Receives E 9-1-1 calls only when transferred from the Primary, Regional, Default or Alternate, or on a secondary routing basis. (full ANI/ALI and TTY call-handling capability)

FUNCTION KEYS

Twelve keys used to perform special functions through the APU. Seven keys are located on the right side of the APU and can activate functions such as ANI storage/recall, TTY function, etc. Five keys are located at the bottom of the APU and perform Hold, Recall, etc. functions.

G

GA (Go Ahead)

Abbreviation used on a TTY call to tell the other call to "Go Ahead". When the GA is received, the other person knows they can now type the next part of the message.

H

HANG-UP CALLS

A 9-1-1 call, in which the caller has disconnected before the call-taker is satisfied with the information obtained or the resolution of the call.

HFL

Hookflash. A Key located on the lower right side of the Dial Pad Keys, which acts like a hookswitch on a regular telephone set. When pressed, it interrupts the line for a pre-set time, usually 0.5 seconds.

HOLD

Maintaining the connection to a line, but allowing the APU user to perform other functions on the APU. When a call is placed On-Hold, the Green LED extinguishes and the Red LED winks at 120 IPM. The HOLD Key performs this function.

HOLD (Key)

A Key located at the bottom of the APU which allows for a call to be placed on hold.

I

IDLE (Mode)

The APU is in the *I* mode either of these conditions exist: The telephone is On-Hook (no dial tone and/or On-Hook symbol is visible), or no functions are selected.

INCOMING CALL

A call (9-1-1 or Administrative) coming into the PSAP. The red LED on the APU key will flash at 60 IPM. An audible signal will be heard.

IPM

Intervals Per Minute. The speed at which LED's indicate the status of a line on the APU. (60 and 120 are the usual speeds)

L

LDA (Key)

** NOT OPERATIONAL **

LED

Light Emitting Diode. A device which acts as a lamp to show the status of a particular key. APU's contain Red and Green LED's.

LIMITED SECONDARY PSAP

Equipped with ANI/ALI display and printout. Receives call only when transferred from Primary PSAP or secondary routing basis. Data cannot be re-routed to another location. Has TTY call-handling capability.

LINE

Incoming or Outgoing dial tone line, often referred to as a 7-digit line, used for "normal' business activity.

LINE PICK-UP KEYS

Keys used to answer incoming calls. Each key contains a Red and Green LED bulb which shows the status of the line. Keys are arranged in rows of 10 keys each.

LSS (Disability Indicator)

Life Support System. An indicator on the ALI Display, showing that a person at the address shown has voluntarily identified themselves as being on life support system(s).

M

MAARS

Modular ANI/ALI Retrieval System. The telephone system used to handle E 9-1-1 calls.

MASSACHUSETTS RELAY CENTERS

Centers in Marlboro and Quincy MA, staffed by NYNEX personnel. Operators are trained to handle and relay TTY calls through two-way typed messages to TTY users and by voice to non-TTY users.

MEM (Key)

Memory. A Key located at the lower right side of the Dial Pad Keys, used to program auto-dial numbers and supervisor setup functions.

MI (Disability Indicator)

Mobility Impaired. An indicator on the ALI Display, showing that a person at the address shown has voluntarily identified themselves as being mobility impaired.

MOBL

Class of Service code for Mobile telephone service.

MODES

APU Operating Modes indicate the status of the APU, through a visual display on the ANI screen.

MSAG

Master Street Address Guide. The address database supporting E 9-1-1.

MUNICIPAL DATABASE LIAISONS

Municipal persons who verify and validate ALI Discrepancy Forms

O

OUTGOING CALL

Using the APU to initiate a call. When a Line key is pressed, the Red and Green LED become lit, indicating the line is now in use.

P

PAY$

Class of Service code for Semi-public Coin (pay) telephone service

PBXr

Class of Service code for Resident PBX service

PBXb

Class of Service code for Business PBX service.

PEI

Plant Equipment Incorporated, of Temecula CA. The manufacturer and supplier of the MAARS equipment installed at the PSAP.

PREPROGRAMMED TTY MESSAGES

A set of 10 preprogrammed messages available for quick response to a TTY caller's request for assistance. Messages are sent by pressing **MEM** and *, and the number of the message (0-9).

PRIMARY PSAP

Most often, the first point of reception of an E 9-1-1 call. (full ANI/ALI and TTY call-handling capability)

PRINT (Key)

A Key located near the bottom of the column of Function Keys at the right side of the APU. It allows the user to print ANI/ALI information, on request. During a TTY call, this key enables, or disables, the printing of the Received and Transmitted TTY messages. The LED will stay lit as long as there is information waiting to print.

PRINTERS

Machines which produce a paper copy of PSAP transactions, including Call Detail Records, Alarm Messages, etc. Normally, two printers will be provided, per PSAP.

PROGRAMMABLE TRANSFER KEYS

A set of keys designed to allow 9-1-1 calls to be transferred to another PSAP. The keys allow a " single button" feature, providing for a quick transfer of calls to predetermined PSAP's or other locations, such as hospitals, Coast Guard, etc.

PSAP

Public Safety Answering Point. The location, either Primary, Regional, Default, Alternate, Full Secondary, Limited Secondary or Ringing, where E 9-1-1 calls are answered.

R

RDL (Key)

Redial. A Key located near the top of the Dial Pad Keys, used to redial the last number called. When pressed in the *I* (Idle) Mode, the APU will display the help or paging message, if any.

RECALL (ANI)

Will allow the ANI to redial, or to initiate an ALI request, within twenty seconds of pressing the ANI sto/rcl Key.

RECALL (Key)

A Key located at the bottom of the APU, which provides a new dial tone without releasing the line.

RECEIVE VOLUME

A feature which provides for the adjustment of the receive volume of a call. It allows the user to adjust receive volume when the caller is either barely audible or very loud.

REGIONAL PSAP

A PSAP operated on behalf of a group of communities, usually as a Primary PSAP.

RELAY

A Key located in the column of Function Keys at the right side of the APU. It initiates procedures which allow the opening, closing or toggling of selected relays throughout the entire MAARS system. (Will be used on a restricted basis in Massachusetts.)

RELAY SERVICE

See Massachusetts Relay Centers.

RELEASE

A Key located at the bottom of the APU, which allows for the disconnection of a line.

RESD

Class of Service code for Residence telephone service

RESX

Class of Service code for Off-Premises - Extension, Residence telephone service

RINGING PITCH

A feature which allows for the ring pitch of incoming 9-1-1 calls to be adjusted. Choices are: a distinctive warble, a high-pitched tone, or completely disabled.

RINGING SECONDARY PSAP

Can only receive transferred E 9-1-1 calls. Equipped for voice communications only.

RINGING VOLUME

A feature which allows the ringing volume to be changed. This can be done while in any mode and the choices range from low, mid-range, or high volume.

S

SECONDARY PSAP

See Full Secondary PSAP.

SELECTIVE ROUTING

The process which enables the 9-1-1 system to route calls to the proper PSAP. ANI and ESN information operate with the tandem switching office to route the call.

SERVICE RESPONSE CENTER

See SRC.

SETB

Statewide Emergency Telecommunications Board. The agency responsible for implementing and maintaining oversight authority over the E 9-1-1 system. Part of the Executive Office of Public Safety.

SI (Disability Indicator)

Speech Impaired. An indicator on the ALI Display, showing that a person at the address shown has voluntarily identified themselves as being speech impaired.

SIGNAL (Key)

A key located near the bottom of the APU. Not used in Massachusetts.

SILENT CALLS

A call on which no voice communication is passed. This may be an actual, valid TTY call, thus call-takers should not hang-up before checking for a TTY call.

SINGLE BUTTON TRANSFER

A basic feature of the MAARS system. It allows for quick routing of calls and the elimination of dialing many digits. The Transfer keys are programmed to dial the number of the location to which the call will be transferred.

SK (Stop Keying)

The TTY abbreviation used to inform the caller to "Stop Keying" (stop typing any more messages).

SPEED DIAL

Feature used to dial a stored number in the APU. Press MEM and the two-digit code number (e.g. 56) and the stored number will be dialed automatically.

SPURIOUS CALLS

See Bogus Calls.

SRC (Service Response Center)

The NYNEX E 9-1-1 control facility located in North Andover, MA. The SRC is responsible for monitoring the 9-1-1 network and handling problems. It acts as a referral center and a resource for system users. Any problems with the MAARS equipment or the 9-1-1 system should be referred to the SRC by calling 1-800-E911-HELP (1-800-391-1435).

STORE (ANI)

The APU can store up to 4 ANI's, for reference at a later time. This is helpful in busy situations. Data is maintained in a Most Recent First format. The ANI sto/rcl Key is used for this function.

T

TANDEM

The telephone switching center which routes the E 9-1-1 calls to the proper PSAP.

TRANSFER

The act of connecting a caller to the proper agency to resolve an emergency.

TRANSFER KEYS

Programmable keys used to transfer calls to another location. Two large keys are provided, usually used to transfer Fire and Medical (EMS) calls.

TRANSFER (Mode)

The APU enters the Transfer Mode when a Transfer Key is pressed from the Emergency Mode.

TRANSMIT VOLUME

A feature which provides for the adjustment of the transmit volume on a call. It allows the user to adjust transmit volume when the caller cannot hear the PSAP Telecommunicator or the Telecommunicator is too loud. This results in garbled or hard to understand conversations.

TRUNK

Incoming 9-1-1 line. Connections between the PSAP and the Tandem switching office are called trunks or 9-1-1 trunks.

TTY

Teletypewriter Device. The communication link between the TTY caller and the PSAP. The MAARS equipment provides users with the ability to communicate in this Mode.

TTY (Disability Indicator)

Teletypewriter Device. An indicator on the ALI Display, showing that a person at the address shown has voluntarily identified themselves with the ability to use a TTY device.

TTY (Key)

A Key located in the column of Function Keys on the right side of the APU. Used to manually enter the TTY mode.

U

UPS

Uninterrupted Power Supply. The AC (Alternating Current) power system, with battery supply, that provides power during commercial outages.

V

VERITRAC®

See Dictaphone.